S
621.31
N7t
Vol. 6
DNRC

PLEASE RETURN

TRANSCRIPT OF PROCEEDINGS
(con't)

Volume 6

Pages 952 Through 1109

May 28, 1975

STATE DOCUMENTS COLLECTION
AUG 1 6 1985
MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

WEDNESDAY, May 28, 1975

The hearing reconvened at 9:05 A.M. on Wednesday, May 28, 1975, in the Chambers of the Montana House of Representatives, State Capitol, Helena, Montana.

The Honorable Carl M. Davis, Hearings Examiner, presided over the proceedings.

APPEARANCES:

APPLICANTS

William M. Bellingham, Esq.
John L. Peterson, Esq.
John Ross, Esq.

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

Ted J. Doney, Esq.
Robert T. Cummins, Esq.
Arden E. Shenker, Esq.
William G. Sheridan, Esq.
Donald McIntyre, Esq.

BOARD OF HEALTH AND DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

Steve Brown, Esq.

NORTHERN CHEYENNE TRIBE, INC.

Peter Michael Meloy, Esq.

NORTHERN PLAINS RESOURCE COUNCIL

Gregory H. Warner, Esq.
Leo Graybill, Jr., Esq.

The following proceedings were had:

HEARINGS EXAMINER: We'll go on the record. We recognize Mr. Shenker in certain preliminary matters.

MR. SHENKER: Thank you, sir. With respect to the witness, Mr. Hofacker, who I understand is to be the next witness, on Friday last, I raised a number of questions regarding materials we had not

yet received. I still have not received any of those materials. Secondly, in addition to that data requested, we have requested during the deposition of Mr. Gilder, one of the employees of the Montana Power Company, all data with respect to the current revisions of the computations of the Montana Power Company and the other four applicants as to their taxes related to the Colstrip project. Now, I note that in connection with some of the exhibits that have been marked by the applicants, that there are references made to such tax data, as well as to other material which we have requested but not yet received; therefore, we believe it would be inappropriate to have any direct examination of Mr. Hofacker in those areas. We simply wish to give notice at this time that we will object to any questions put to Mr. Hofacker on direct examination on the subjects on which I requested information be produced last Friday, as well as the subject involving tax data, to which I refer again today.

HEARINGS EXAMINER: Let's delineate that. Since we don't have a transcript on last Friday's request, Mr. Shenker, do you have down in your notes what you require?

MR. SHENKER: I think so.

MR. BELLINGHAM: I wonder -- Mr. Ross is not here, and he's the one who has been taking care of these matters. I suspect that he will be back in just a minute.

HEARINGS EXAMINER: Here he is. Before we start on that, why don't you confer with Mr. Ross on that? Do you have some other matters in addition to those?

MR. SHENKER: No, I also have some matters with respect to Mr. Labrie.

HEARINGS EXAMINER: Tell us what else you need on Mr. Labrie.

MR. SHENKER: The deposition of Mr. Gilder I have not yet received, although we are looking for a copy, but in connection with the deposition of Mr. Labrie, Volume 1 of 2, taken April 15th through 17th of 1975, page 115, there's some material there that refers to Mr. Gilder. We will need his deposition in order to complete that. Secondly, the third volume of Mr. Labrie's deposition, taken May 5, 1975, page 5, discusses economies of scale and diseconomies of scale, studies which he was going to look for and which we have not yet received. Thirdly, and most important with respect to Mr. Labrie's deposition, we have received Volume 1 of 2, but we have not received Volume 2 of 2.

HEARINGS EXAMINER: Of the total deposition?

MR. SHENKER: Correct. That's of the first installment deposition taken April 15th through 17th of 1975, and we don't know where Volume 2 is. It hasn't been received by the Department yet. The Court Reporter normally gives us a copy directly, but we haven't received one yet. We received the first volume on May 17th.

HEARINGS EXAMINER: That's on Mr. Labrie?

MR. SHENKER: Perhaps the way to expedite that, if the applicants have a copy of the second volume of Mr. Labrie's deposition, April 15th to 17th, we could have a photo copy of that made today and have a copy we can look at.

HEARINGS EXAMINER: Getting back to Mr. Hofacker, would you respond to where you are on that, gentlemen? Do you know?

MR. BELLINGHAM: All right, let's go down to line 19. What's that?

MR. SHENKER: You refused to let him answer the question about Jack Whitcome's testimony.

OFF RECORD FOR DISCUSSION OF PROCEDURAL MATTERS.

BACK ON RECORD.

HEARINGS EXAMINER: Mr. Bellingham, we've been off the record briefly to discuss requests that have been made by counsel for the Department of Natural Resources from applicants, regarding certain information pertaining to the deposition of Mr. Hofacker. Could you please respond as to your position as to each one of these items, starting with item 1 on page 92?

MR. BELLINGHAM: Well, item 1, page 92, Mr. Hofacker's deposition of March 3, 1975, refers to whether or not Mr. Hofacker knew that Mr. Voytko was going to be a witness or not, and he had answered in line 12, "I will refer that to my counsel here. I am not sure," and another question was asked him, and I objected on the grounds that it had been covered, and so forth. Mr. Shenker now is quite concerned that he wasn't able to ask Mr. Hofacker the substance of conversations that he may have had with Mr. Voytko as to whether or not he would be a witness. I deem it immaterial and an obstructionist tactic; however, I have checked with Mr. Hofacker and he has informed me that at no time has he ever discussed with him the matter of whether or not he was going to be a witness at this hearing, so for the record, we will state that.

HEARINGS EXAMINER: For the record, who is Mr. Voytko?

MR. BELLINGHAM: He was the project manager for the Westinghouse

Environmental Group.

HEARINGS EXAMINER: Very well. Mr. Shenker, did you want to say something at this juncture?

MR. SHENKER: The only comment I would make is a general one, which I made the morning of the first day of this hearing, that I think this is not an appropriate procedure. Obstructionist tactic, nothing, that was March 3, 1975, and proper discovery should have permitted us to get an answer to that question. Here we are, three and a half months later, trying to still find out what our discovery is in the case while we're in the middle of the hearing.

MR. BELLINGHAM: May I ask, did you ever write a letter or anything relative to this?

MR. SHENKER: Yes, and on Friday, I went into the record again, the same letter, March 27, 1975, as soon as the deposition was transcribed.

MR. BELLINGHAM: Well, I think the answer is complete. There's just nothing of substance here to direct to anybody's attention.

MR. SHENKER: Well, I'm willing to be satisfied by Mr. Bellingham's -- what I take to be authorized admission on behalf of the witness, Mr. Hofacker, on behalf of the applicants, that Mr. Hofacker has had no contact with Mr. Voytko, on the subject of whether he will testify and what he would testify to.

HEARINGS EXAMINER: All right. Is there some ruling you want on that at this time?

MR. SHENKER: No, with that stipulation I'm willing to be satisfied.

HEARINGS EXAMINER: He will be on the stand and you will be permitted to ask him that question under oath which will go into the record of these proceedings.

MR. SHENKER: Okay.

HEARINGS EXAMINER: All right, number 2 seems to present somewhat more of a problem. Have these contracts been made available for inspection by the Department of Natural Resources?

MR. ROSS: They've asked a number of questions about our contracts, and we provided information on what you might call major contracts, and we've also indicated that there are numerous -- we guess maybe a thousand or more -- individual contracts with Montana Power Company and individual persons covering such things as yard lights or pumps, or whatever, and it's my understanding that these contracts are in individual divisions. For example, here in Helena, the Helena office might have a contract with people in the area. I've never even seen the contracts myself, but we could try to get a sample of some of those contracts if that would suffice.

HEARINGS EXAMINER: Mr. Peterson said you were going to try to develop something along these lines. Did you have any success with that?

MR. PETERSON: Well, we're attempting now to get some contract specimens out of the Helena office.

HEARINGS EXAMINER: Mr. Shenker, specifically, what is it you want with the contracts? Maybe that would be of some assistance.

MR. SHENKER: You'd have to refer to page 98 of the deposition of Mr. Hofacker, which refers, in turn, to number three item on the subpoena issued by the original Hearings Examiner in this case, directing the Montana Power Company, some three months ago, to produce what it called a complete list of power supply contracts currently in force, or prospective, for each applicant. I asked at that time, March 3, 1975, in the course of Mr. Hofacker's deposition, whether that list was something that was being copied now. Mr. Peterson said "No." Mr. Peterson said he would check it out. He said the contracts were all individual. There might be a list, but if there isn't a list, he didn't understand, and he said, "You'd have to go to each file on which we have a contract," but -- and this is the part I want them to do -- "I am going to provide you with any information we have relative to these contracts, and then, if you are not satisfied, we will go from there." I asked whether that was coming in today, also, and the answer was "Yes." We did receive those major contracts to which Mr. Ross refers. We have not received any information that they might have relative to the thousand other contracts. That's what we want.

HEARINGS EXAMINER: You want the thousands of other contracts?

MR. SHENKER: We want the information relative to those contracts. A specimen example is one. Other information would be a description of how many they have, of what variety. There is a way to give information on those contracts. The most burdensome way is for everyone to look at every contract, but on March 3rd, over three months ago, we were trying to find out something about the nature of those contracts, and to this day we still don't know.

HEARINGS EXAMINER: Where are those contracts kept?

MR. ROSS: They're scattered all over the Montana Divisions. I honestly don't know how many there are, and we don't have a summary or a list of them. In order to be exact, we'd have to make a complete inventory of all our offices within our division.

MR. SHENKER: Some kind of rudimentary search, at least, could have been commenced after the subpoena was issued or when the interrogatories were served or when the undertaking was made on March 3rd, but at this time, on May 28th, we still have no showing that they have attempted to comply with that aspect of the subpoena, and we don't have any information at all relative to those thousand contracts.

MR. ROSS: Well, neither do we, other than the summary I just gave you. They are scattered throughout all our division, and I told you they cover things such as yard lights. I'm not even sure they're all in writing.

MR. SHENKER: Well, it's within the power of the power company to get the information in some form on the undertaking that was made by Mr. Peterson. I recognize that he's been busy, and this is one that's escaped his attention, but it seems to me that they can get some information for us, and they haven't. Now, if they're going to be referring to their loads based on what those contracts refer to, I'm going to be objecting to testimony with respect to the loads based upon those contracts.

HEARINGS EXAMINER: Well, each is based upon some sort of contractual relationship, I suppose.

MR. SHENKER: I beg your pardon?

HEARINGS EXAMINER: I say, each hookup is based on contractual relationship. Are you talking about residential loads?

MR. SHENKER: I don't know, Mr. Davis. That's why I'm trying to find out.

HEARINGS EXAMINER: Does the power company have a breakdown on what is commercial, industrial, residential, and that sort of thing?

MR. BELLINGHAM: Do you mean as far as the total load is concerned?

HEARINGS EXAMINER: Yes.

MR. BELLINGHAM: Yes, sir, and there will be testimony on that, but for us to dragoon in here the thousands of contracts that may be in existence -- I don't know -- it seems to me it's a press of advertence, and as far as the information contained in there, it's of minimum value as far as this particular case is concerned.

HEARINGS EXAMINER: Does the power company have any objection to their looking at and inspecting any of those contracts?

MR. BELLINGHAM: No, sir, I'm sure we don't. We are in the process now, I understand, of obtaining some sample contracts as such from the Helena Division, is that correct, Mr. Ross?

MR. ROSS: We're going to have Mr. Anderson call around the divisions and try to make some kind of a survey, what contracts there are, and so forth, and pick up some samples. I'm sure that is not going to satisfy the request.

HEARINGS EXAMINER: Well, see what you can find out. All right, on the questionnaire of Mr. McElwain, that matter was presented to me Friday. It was objected to by the applicants. It will be my order that you produce Mr. McElwain's questionnaire. The next question is the material for Bonneville Power Administration, which I have as item 5, and I understand that two of the three items have been provided, and the third is forthcoming.

MR. SHENKER: Yes, I'll accept Mr. Ross's undertaking that the third item will come here today.

HEARINGS EXAMINER: No. 6 is correspondence with Mr. White and I understand from Mr. Ross that he's going to provide that today.

MR. SHENKER: I think you omitted, Mr. Davis, the item with respect to the computer program.

MR. BELLINGHAM: Now, the deposition itself, does not specifically, as I understand it, go into which particular computer programs they are interested in. The questions leading up to the request would indicate, probably, computer programs relative to load forecasting, assessment of loads, and if that is the situation, it is my recollection that following the deposition of Rob Stuart, such a computer program was turned over to attorneys for the Department. Now, I am not certain which attorney that was turned over to, but I believe, to the best of my recollection, it was Mr. Sheridan.

HEARINGS EXAMINER: Mr. Sheridan indicates to the contrary, to the best of his recollection, before we went on the record. Mr. Sheridan?

MR. SHERIDAN: Yes, sir.

HEARINGS EXAMINER: You have no recollection of receiving the computer program as to load?

MR. SHERIDAN: No, sir.

MR. BELLINGHAM: Don't you recall Mr.Stuart bringing a bunch of material down?

MR. SHERIDAN: Right, but he did not bring the computer program itself.

MR. BELLINGHAM: What did he bring?

MR. SHERIDAN: He brought some figures with respect to forecasts.

MR. BELLINGHAM: But wasn't that the computer?

MR. SHERIDAN: No.

HEARINGS EXAMINER: Is that available?

MR. BELLINGHAM: Yes, it's available.

HEARINGS EXAMINER: All right, you'll try to get it. Now, this is the load. Mr. Shenker's request has gone beyond that point. You do want it as to loads?

MR. SHENKER: Certainly, I want it as to loads. I want their computer program, what the capacity is right now, what they put on their computer. They don't have to give me all the programs if they can tell me what the computer is programed to do. There's a list, I'm sure, that can be compiled.

HEARINGS EXAMINER: All right. We'll soon have a witness on the stand that can tell you that, and if it does require some time, we're going to continue. This, as you know, is the last of the Board of Health hearing, and at some time I think we can recall the witness, as we've discussed with Mr. O'Connor, if we find there's some information that is not available on the computer, and also, on the contract samples; however, depending on what speed we proceed with, we may be able to provide some of that prior to the time the witness gets off the stand, if they're making an effort.

MR. SHENKER: The last item I took on Friday does not specifically relate to Mr. Hofacker. It relates to all the witnesses for the applicants. We wanted the interrogatory question answered that told us who answered which interrogatory, and we have that information from the Pacific Power and Light Company, for the Washington Water Power Company, for the Puget Sound Power and Light Company and the Portland General Electric Company, so the only one we don't have is for the Montana Power Company.

HEARINGS EXAMINER: Mr. Ross, have you given any thought to that request of last Friday?

MR. BELLINGHAM: I'd like to state that during the taking of the depositions, and there were many of them, each deponent was asked, as I recall, in detail, as to which interrogatory he participated in, and certainly, that gives us a great deal of information in that regard, I'm sure.

MR. SHENKER: I'd say about 20% of the interrogatories were covered in that way, with the deponent saying, in most cases, they didn't know, but it wasn't they.

MR. ROSS: When we filed our answers to the original interrogatories, interrogatory No. 139 reads: What is the name and address of each person who participated in the answers to these interrogatories, we listed Roger Hofacker, Don Gray, Bob Labrie, Dan Berube, Wally Blenkmark, John Evans, Dan Ragen, Bob Davy, Carl Anderson, John Burke, Paul Schmickel, Art Neal, Leonard Deckel, Chuck Gilder, Martin White, Bill Talbot and Walt Kelly. We didn't specify which one of these individuals answered which interrogatory, but as Mr. Bellingham said, I think this was asked during the depositions, and some of these answers were answered by more than one person, probably.

MR. SHENKER: That's not uncommon, and the other applicants have indicated the number of people on some interrogatory answers who did participate in those particular answers. What we have in response to interrogatory No. 139 is a buckshot answer that doesn't tell us who answered a given interrogatory.

HEARINGS EXAMINER: And that was the question, obviously.

MR. SHENKER: That was the question. Now, we have the problem that if a witness comes to the stand and we ask him about interrogatories, he says, "No, I didn't participate in that one, I don't know anything about that." We did not stop for every deposition to ask every witness each of the 275-odd interrogatories, did he answer that one, did he answer this one, et cetera, et cetera, all the way through. We are entitled to an answer to the interrogatory. The other applicants have managed to do it. I think the Montana Power Company can, too.

MR. BELLINGHAM: I think if you look at the interrogatory, the way it's couched, "What is the name and address of each person who participated in the answers to these interrogatories," --

MR. SHENKER: That's the last question, Bill. The first question was, "List the name and address of each person who participated in answering each interrogatory."

MR. BELLINGHAM: Where's that?

MR. SHENKER: That's at the beginning of the interrogatories.

MR. BELLINGHAM: Well, that was a general statement in the beginning.

MR. SHENKER: That's right.

MR. BELLINGHAM: We don't deem that we were under compulsion to answer that due to the length of time and other matters that were mentioned in them.

MR. SHENKER: Well, that was your excuse on February 26th when your answers were due, but it seems to me that since February 26th, since the interrogatories are deemed continuing, an effort could have been made by the Montana Power Company, the same way it was by each of the other applicants, to give us an answer to that question.

MR. BELLINGHAM: There is no specific interrogatory addressed to us as to that particular item that each interrogatory should be specified as far as the party who participated in answering, and insofar as this legal duty, because they requested in the forward of their interrogatories, that we do certain matters, we don't deem they arrived at any legal duty to us as a result of their request.

MR. SHENKER: They are now raising an objection to answering the interrogatory. They did not do so on Friday and none of the other applicants raised such an objection. I think we're entitled to know who participated in which interrogatory answers.

HEARINGS EXAMINER: Well, the witness will be on the stand under oath, and each one can be asked the question. If it's pertinent, they're going to cover the whole range of the spectrum, I assume, on their direct, and at that time, if you're still cross-examining their assistants, I'm sure you'll ferret out exactly what each one knows. I don't see that that's going to be a great deal of prejudice, so I'll overrule that motion and we will proceed.

MR. SHENKER: Did you want me to put on the record now the matters with respect to Mr. Labrie?

HEARINGS EXAMINER: If you would. It might be beneficial.

MR. SHENKER: There are two items now with respect to Mr. Labrie. One is page 115 of Mr. Labrie's deposition, Volume 1. There's a reference to information that Mr. Gilder was supposed to be preparing, and we don't have that information. Second is on Mr.

Labrie's deposition of May 5, 1975, the studies on the economies of scale, and the diseconomies of scale, he was going to look for. An additional item, I suppose, refers both to Mr. Hofacker and to Mr. Labrie, and that's the additional tax data, the recomputations of the taxes that the Montana Power Company forecasts for Colstrip. They had been operating on a 1971 formula, and it was under review and revision as of March 3rd, and we still have not received that data.

HEARINGS EXAMINER: Do you have any objection to the applicant producing that information, if it's available?

MR. ROSS: With respect to the study on the diseconomies of scale, I asked Mr. Labrie, and he said he is not aware of any, but he will look, so we will look, and if we find any, we will produce.

HEARINGS EXAMINER: How about on additional tax base formula?

MR. ROSS: I also will pursue that and produce that if we can find it.

HEARINGS EXAMINER: And on the first question, page 115, Volume 1, of Mr. Labrie's deposition, why don't you look that over and then, at a subsequent time, you can put some information you don't get in the record, and make your objections, if you have any, or else provide what you have.

MR. ROSS: Fine.

HEARINGS EXAMINER: Does anyone else have any preliminary matters before we proceed today? I would like to call your attention to a written statement containing resolutions made March 10, 1975, addressed to Mr. Sabo, which came into my hands yesterday, which contains a resolution from the Montana Wildlife Federation. Under our previous discussion, and I believe we so stipulated, I agreed that if any communications came to me as Hearings Examiner, under the Administrative Procedure Act, written evidence may be received to expedite the hearing. Without counting on expediting it at any length, we did agree that if anyone objected to any written communication, I would then advise you it would be necessary that they appear in person so they would be available for cross-examination, as the rule requires, so at this time I have given counsel present, at least, a copy of this letter, which I received yesterday, and I would now like to know if anyone has any objection as to this being placed in the record?

MR. SHENKER: On behalf of the Department, we have no objection.

MR. BELLINGHAM: You would assume that, in view of the nature of the letter; however, I see a problem here, and that is this: if we allow letters of this kind, and resolutions, to come in and be placed of record, I can see an absolute deluge of similar type letters, correspondence, motions, resolutions of all kinds, coming in from various organizations, some of them solicited and some of them unsolicited, and it seems to me it can open the proverbial Pandora's box if we commence allowing matters of this kind to come in, and accordingly, on behalf of the applicants, I object to this type of material becoming a part of the record.

HEARINGS EXAMINER: Very well, pursuant to our original stipulation, I will so advise the author of the letter and invite him to attend and present his evidence, when he will be subject to cross-examination. Mr. Meloy?

MR. MELOY: Mr. Hearings Examiner, does that mean that every time someone writes a letter, and there is an objection entered, and you rule that they must come in, isn't that going to result in having many, many more parties, and much, much more cross-examination?

HEARINGS EXAMINER: I'm sure it will, but I believe our stipulation -- when we discussed that at our previous hearing, I believe that's the way we ended up after a rather lengthy discussion. I'm sure it's going to encumber the record, but probably either way.

MR. MELOY: It would seem to me, Mr. Hearings Examiner, that the objection raised by the applicant to submission of just one single sheet of paper is likely to result in Mr. McNeil coming in and becoming a party and having his shot at cross-examination, and it seems to me that by objecting, the applicants have entered a bid for delay, or potential delay, in these proceedings.

MR. BELLINGHAM: I appreciate Mr. Meloy's concern for the manner in which we are conducting this particular hearing, but I stand on the original statement I made.

HEARINGS EXAMINER: I think we all agreed to this procedure and I feel bound by it unless you want to reopen the whole thing, if my recollection is accurate, so I'll write this gentleman, and of course, I think the discussion is pretty clear as to the right of cross-examination, even though we're not using the other rules. Very well, I'll inform the author of the letter that he is invited to attend the public hearing. Of course, that's the nature of the hearing. If there are no other questions, Mr. Bellingham, do you want to call your next witness?

MR. BELLINGHAM: My second witness, Mr. Hofacker.

ROGER A. HOFACKER, called as a witness by the Applicants, having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION OF ROGER A. HOFACKER

Direct, by Applicants

By Mr. Bellingham

Q Would you state your name?

A Roger A. Hofacker.

Q Where do you reside, sir?

A 1235 Steel, Butte, Montana.

Q How long have you lived in Butte?

A Approximately twenty-four years.

Q By whom are you employed?

A The Montana Power Company.

Q What is your present title?

A Vice President and Chief Engineer.

Q Let's go into your background before we get back into the company. What is your educational background, Mr. Hofacker?

A I graduated from high school in Billings, attended four years at Montana State University.

Q What years?

A 1935 to 1939. Graduated with a Bachelor of Science degree in electrical engineering. I've since had a thirteen-week course at Harvard in the advanced management program and attended a four-week management program at the University of Idaho, in Moscow, called a public utilities executive course. I attended twelve weeks of a special course for public utility engineers at Westinghouse Corporation in East Pittsburgh. I believe that's about it.

Q What about the Harvard Business School?

A I mentioned that one.

Q What year did you finish at Harvard?

A Spring, 1969.

Q Would you next please describe the history of your employment with the Montana Power?

A I was first employed by them in October of 1939, in Butte, Montana. After about six months there, I went to one of our small hydroelectric plants for a period of six months. I was an assistant operator, or oiler, whatever you want to term it.

Q What was your job, and where was that?

A I was an assistant to the operator of the plant in maintenance and in times of trouble, switching, and so on and so forth, that type of operation of a hydroelectric plant, going from there to Helena again in October 1940, where I was an assistant to the Division Superintendent in engineering-type work. I was there until September '41, when I went into the service, and in November of '45, returned to Helena from the service.

Q What branch of the service were you in?

A The Signal Corps.

Q Did you serve overseas?

A I did.

Q How many years were you in the service?

A Four years and five months, I believe it was.

Q Continue, please.

A As I say, I returned to Helena in November of '45, and in

February '46, I was transferred to Lewistown, Montana, where I was an assistant to the Division Superintendent. I was also engaged in the marketing area of lighting and wiring advice service to customers. I was in Lewistown for about three and a half years, and was transferred in July of '49 to Livingston, Montana, where I was Assistant Division Superintendent of the Bozeman - Livingston Division. The Livingston, Big Timber, Gardiner area was my area of operations.

Q Let's go back here to the Bozeman - Livingston Division. What type of duties did you perform?

A It was the maintenance of gas and electric service, operation of those systems, and supervising certain amounts of construction taking place with the serving of customers in that area of the division. I was also involved in budgeting procedures and reporting procedures of various kinds. I believe that about takes care of that one.

Q Your next tour of duty was performed where?

A In October of 1951, I was transferred into the General Office Engineering Department into the transmission design and construction section, which was designing and writing specifications, placement of orders for materials, supervising the writing of contracts for constructing the lines, supervising the inspection of the construction and the final acceptance of the lines, and in that position, also, was in some computer studies on the need for transmission lines. That was in conjunction with Mr. Stewart Barker, who is no longer with the company, having retired some years ago. Following that assignment, I was made manager of the Purchasing Department effective the 1st of January, 1957.

Q What duties did you perform in that capacity?

A The placement of orders for materials and the details involved in getting the materials to the site. I also had some supervisory duties over the stores, the inventory materials, within the company.

Q What was your next duty as far as any change was concerned?

A In February 1, I believe it was, 1961, I was transferred again, back to the Engineering Department, the General Office Engineering Department as Assistant Manager of that department. My principal activities in that area were in planning and economic studies associated therewith.

Q What did this involve?

A Well, working again with Mr. Barker, under the supervision of Ray Ball, who was the Chief Engineer, who also has retired, working on resources, planning and resources, generation and transmission, studies associated therewith as to their electrical feasibility and economic alternatives. I also became rather deeply involved, as time went on, in coordination activities with other utilities and with other agencies, such as the Bureau of Reclamation and Bonneville Power Administration.

Q What about load forecasting? Did you have anything in this particular field?

A I was associated with Mr. Barker, who was essentially the load forecaster, but I worked with him, and ultimately took over that principal duty as the years progressed.

Q What was your next capacity?

A Assistant Chief Engineer, and I'm trying to recall the date that took place. I think it was about 1970, somewhere in there, I don't remember for sure on that one. I remained Assistant Chief Engineer until September of 1969, when I became Chief Engineer.

Q You said 1970 -- I suspect you mean --

A I'm getting confused here. I guess it must have been about '65 or '66, somewhere along in there that I became Assistant Chief Engineer, but my duties did not change other than assuming more responsibility in the coordination and planning area.

Q And when did you become Chief Engineer?

A September of 1969.

Q Your next move, insofar as capacity is concerned, and title, was when?

A In June of 1973, I was made a Vice President and Chief Engineer.

Q Going back to your Chief Engineer duties, which you assumed in 1969, what was the nature of these particular duties?

A The General Office Engineer is essentially responsible for all of the engineering, with the exception of the gas activities work of the company. There's the water, the communications and the power, and as Chief Engineer, I was responsible for all activities in this area. This included substation design of building transmission, distribution, relay work, long range planning, forecasting, the generation of the engineering planning section, the communications system, which installs and operates, as well as plans our internal communication system. I think I've mentioned these. We have about seven different sections. I don't know whether I listed all of them or not.

Q These are sections that come under your jurisdiction?

A That's right. Each one has a section head, and as Chief Engineer, I had two Assistant Chief Engineers, one of them essentially in the generation area. The other Assistant Chief Engineer handles the rest of the activities, that is, the distribution, the transmission, the substations, the relaying, the communications. We also, as of the last few months, have a Manager of contracts, resources and planning, who reports directly to me.

Q Would you, if you can, name the sections and divisions that come under your jurisdiction?

A We've got distribution, transmission, substation, relay, communication, generation, and planning.

Q Approximately how many men are involved as far as these particular sections are concerned?

A I believe the number right now is around 125.

Q In that area?

A Yes.

Q As far as your duties with the Montana Power are concerned, have they entailed cooperation, coordination, with other companies -- and when I say companies, I'm talking about similar type companies such as Montana Power, utilities, and so forth in the Pacific Northwest?

A Yes.

Q Are you familiar with the history of operation and cooperation with other companies by Montana Power over the years?

A Yes.

Q Let's move to some of the companies involved and to some of the organizations to which Montana Power Company belongs and in which you have been involved. When was the first history of operation with other companies as far as the first time is concerned, by Montana Power, with any other company?

A In 1923, when we established an interconnection with the Washington Water Supply.

Q Is Washington Water Power Company one of the applicants in this case?

A They are.

Q What was the nature of this particular cooperation?

A Well, we added interconnection with them in the vicinity of Burke, Idaho and we exchanged power back and forth over this interconnection.

Q Will you describe what you mean by interconnection?

A That's where our transmission system connected with their transmission system so the power could flow through from one to the other.

Q And the reason for that is just as you stated, I assume, is that correct?

A Right, and it enabled us to make more economic use of our resources.

Q But basically, you were then in a position to use their power and vice versa, is that correct?

A Yes, as the needs arose.

Q Now, let us start with some of the various agreements, pools, conference committees, and so forth, to which Montana Power belongs or is associated in some form. Let's start with the Northwest Power Pool. Is Montana Power Company a member of that particular organization?

A It was one of the initial members.

Q Would you describe what the Northwest Power Pool is?

A Well, it's a purely voluntary organization that developed over the years. It was not necessarily called the Northwest Power Pool initially, but as interconnections grew between the various utilities in the Northwest and with the Idaho Power Company to the south, and Utah Power and Light Company to the south, with these interconnections we were able to work with eachother in the use of our resources, to pool our reserves, so to speak, and that type of activity, and then in 1942, I believe, a federal agency directed, in furtherance of the war effort, that it be formed and formally operated. To my recollection, there was still no formal contract, nor has there been one to this date, but the advantages of pooling of operations -- and this is essentially what it was -- very little in the way of planning of resources, but it was hydraulic coordination of our resources. It realized some very beneficial elements in the operation of our respective systems.

Q Approximately how many members does it have?

A I believe it's 17 or 18 members.

Q And the main purpose of this particular pool is what?

A Coordination of the operation of our systems.

Q What do you mean by that?

A Well, as I indicated before, we arrange through the operating committee the buying and selling of power, either on short term, or sometimes a year ahead, and things like that, arrangements made through the coordinator, where one person, one party, has the need and the other has the surplus. We plan ahead what capabilities the various utilities have in the way of hydro coordination.

Q In your opinion, has it enhanced the reliability and efficiency of the operations of the members belonging to it?

A It certainly has, because it bound the base on which we're operating.

Q And it's not limited to any one form of generation, is it?

A No, sir. It was initially hydro, but there's nothing to prevent it covering thermal, as it comes up.

Q Well, does it involve thermal generation?

A Yes, sir.

Q Now, what about Pacific Northwest Coordination Agreement? What is that?

A Well, in 1961, as I recall, there was a treaty signed with Canada for the joint development of the Columbia River system, which involved some installations in Canada as well as on this side of the border, and one, in particular, the Libby project, would back water into Canada and so forth, so in view of that, a treaty was necessary to have a more formal contract to provide for the various stipulations within the treaty, one being the United States parties to the treaty have had to prepay a certain amount of dollars to the Canadian government in advance of their actually building their projects in Canada. I think that was called Canadian Treaty power. An arrangement was made whereby the surplus power developed through this coordinated development would be used by entities in the United States until such time as the Canadians would need their power, so there was an effort made on the parts of all of the parties involved with the electrical business and the Columbia River drainage that started in '61 for coordination of contract. I believe there were two one-year contracts and then I believe it was a ten-year, and then, finally, in 1964, a 39-year contract, I think it is, written and signed by all parties, that involved in rather great detail the coordination of the water in the Columbia River drainage to minimize any loss of power due to spillage of water. It's hydraulic coordination is what it is sometimes called.

Q As one of its purposes, was it to allow equitable distribution for the benefit of all?

A It was, because of the upstream storage and the downstream benefits from that upstream storage, it provided a formula by which this was determined and payments made.

Q Is Montana Power a signatory to the agreement?

A They are.

Q Do you know whether the same parties involved in Northwest Power Pool are also involved in this agreement?

A Essentially the same ones.

Q Calling your attention once again to the Northwest Power Pool, I think you indicated there were approximately 17 or 18 members. From what part of the country do these members come?

A Well, the northwestern states, Washington, Oregon, Idaho, Montana, Wyoming -- Pacific Power and Light's operation is in Wyoming, Utah; also, there were some Canadian entities in the

Northwest Power Pool, but they are not parties to the Pacific Northwest Coordination Agreement.

Q Basically it involves the states in what we consider the Pacific Northwest?

A Right.

Q What about the Western Systems Coordinate Council? Is Montana Power a member of that group?

A One of the charter members. It was organized in 1967, initially covering, I believe, the eleven western states and a province in Canada. It now has about 44 members and about 18 or 19 associate members, a member being one with generation, associate members those who are in the electric business, but have no resources of their own in the way of generation. It was organized to enhance the reliability of the power systems in that area. We exchange plans for the purpose that each party then can assess what another party's plans may do electrically to their system. For instance, putting in a new transmission line may have an effect upon somebody else's system, and we exchange these plans ahead of time. There are a lot of joint studies of the Coordination Council, looking ahead with proposed facilities and seeing if there are any problems that should be eliminated. I think that about covers it.

Q These states that you mentioned, approximately how many did you say?

A Eleven, I believe it is.

Q Could there be several more than eleven? Could there be thirteen?

A I think with some additional parties, it could well be. There have been a few parties in and out since the contract was signed.

Q Approximately eleven?

A Right.

Q And those are all located in what part of the United States?

A The western United States.

Q Turning next to the Pacific Northwest Utilities Conference Committee, what do we have here?

A Well, the Montana Power Company only recently joined that committee, although we attended many of their meetings for years. It's a coordination of plans, as I understand it, of all of the people in the power business in the Pacific Northwest, public, private, federal. They put out forecasts on loads and resources, essentially a coordination of planning.

Q And what region is that devoted to?

A The Pacific Northwest.

Q Do you have any approximation on how many members there are?

A I believe there are something in excess of a hundred of them -- 108, 110.

Q Let's turn next to the Joint Power Planning Council. Does Montana Power have representation in this council?

A We do.

Q And what is the purpose of the council?

A Pretty much as the name implies. It's an exchange of plans by those active in the council, looking ahead as to whether there are going to be adequate resources for the loads as they develop, and who plans to have what resources and during what time.

Q Intercompany pooling?

A That one has been enlarged in the past year. Initially, it was the four companies, investor-owned utilities, in the Northwest, Puget Sound Power and Light, Pacific Power and Light, Portland General Electric and Washington Water Power. I'm not sure as to the date that it was formed, but it is an operating group that operates, essentially, as a single entity, mainly coordinating their activities with the federal operations in the Northwest, as I understand it. Last year the four members offered to three other utilities that they might desire to become members, and they now have, I think, seven members -- yes, the additional members are the Montana Power Company, the Idaho Power Company, and the Utah Power and Light. This planning organization is looking ahead to the needs of the area and we also agree on what types of reserves are adequate, both operating and forced outage reserves. We have certain ground rules concerning buying and selling of surplus power. It's a coordination effort, in a sense, to look at the seven companies as one company in this aspect at times.

Q Pacific Northwest Power Company?

A That's a combine of four privately owned, investor-owned companies, as Mr. O'Connor, I believe, mentioned in his testimony, Portland General Electric, Washington Water Power, Pacific Power and Light, and the Montana Power Company. It was organized in the early 50's to attempt to develop hydroelectric generation on the Snake River.

Q Where is the Snake River?

A The area in which the development was contemplated is roughly the border of Washington, Oregon and Idaho.

Q Associated Mountain Power System?

A Sometimes referred to as Amps -- It's a group of five utilities, Washington Water Power Company, Idaho Power Company, Utah Power and Light, Pacific Power and Light, and the Montana Power Company. We got together in the middle 60's to make efforts in the joint planning and perhaps ownership of generation and transmission facilities to minimize reserve requirements and to attempt to get the most economical power resources for the five companies. Since we were all interconnected, we assumed that we should be able to realize some benefits, and we did, and we are, realizing benefits.

Q You mentioned reserve requirements. Would you please explain what you mean by this expression?

A Well, it's that that you have sitting over here to take care of emergencies that arise. The operating reserves are those reserves that you have immediately available or within ten minutes, or something like that, to take care of emergencies, ripples, a line opening up, and then, a short while later, a closed hydro unit dropping off and back on. It will be a short period of time, as differentiated from what we call forced outage reserve, which is a major breakdown that may be from a few hours to a few months. The forced outage reserves, that's on peak capability. Where you carry energy reserves for thermal units, we do not carry them for hydro units, because normally, if you shut down a hydro unit, you don't lose the water and you've got that generation available to you at a later date.

Q Basically, then, it's something that a utility company does in order to take care of emergencies insofar as power is concerned?

A Right. I think the forced outage reserve might be compared to the spare tire in your car. You hope you never have to use it, but you could have a flat when it was important to get some place at a specified time, and if you don't have a spare tire, you won't make it.

Q You mentioned the terms once again of peak and energy. Now, I realize that Mr. O'Connor has gone into this somewhat, but I think it might be beneficial to the members of the board who will be reading the transcript to once again explain what you mean by peak and peak demand, as well as energy resources and energy loads, and so forth, because so much of your testimony is going to be referring to these terms.

A Well, peak means that power supply, maximum amount, in some specified time. Now, you have the peak during one hour, or peak during one day, or peak during a month, or peak during the year. That is the maximum amount that you delivered at that time.

Q It's the highest demand?

A The highest demand, whereas, energy, we normally think of average energy, which is the average over the period of time. That energy, of course, includes the energy provided over the peak.

Q And peak resources of the company are what?

A Those resources we must have to carry this expected peak demand.

Q What about energy resources?

A Where you have the ability to provide the energy that is necessary to operate the equipment that the customer has on line.

Q Let us return now to some of the organizations to which Montana Power belongs. We're talking here about coordination-cooperation-type organizations. Are there any others that come to your mind that we have not mentioned?

A We're a member of the Rocky Mountain Power Pool, which is a pool similar to the Northwest Power Pool, but somewhat more loose in its operations. It's more of exchange of operations, operating data. It includes, I think, the western half of Nebraska. I'm not sure, but it includes part of Iowa, Colorado, Wyoming, Montana, and I believe, part of Utah, but it's a coordinating group.

Q Any others?

A I can't think of any.

Q Northwest Electric Light and Power Association?

A Oh, that is an association of investor-owned utilities. We have committees within the association that exchange information, technical ideas, in some station areas, transmission, generation, and so on, but it's not -- it's an exchange of information type of association.

Q And what states does it cover?

A I think northern California, Oregon, Washington, British Columbia, Alberta, Idaho, Montana, Utah -- I believe that's it -- and Wyoming, Pacific Power and Light being in Wyoming.

Q Do you have agreements and working relations with any federal agencies?

A We do, with the Bureau of Reclamation and the Bonneville Power Administration.

Q Let's turn first to the Bonneville Power Administration. What type of relationship and agreement do you have with them?

A Well, one of them, we have a long term purchase contract that I believe is in its 24th year, something like that, where we purchase forty megawatts of energy, and on top of that, ten megawatts of peak, so it's an essentially fifty megawatt peak and forty megawatt energy. As I say, we've been buying that to close to 24, 25 years now.

Q What is the Bonneville Power Administration?

A It's a federal agency created by the federal government for the marketing of the power generated by the federal installations in the Columbia River.

Q Does it have operations in part of the State of Montana?

A It does. I believe their territory by statute was 75 miles east of the Continental Divide, I believe.

Q What about the Bureau of Reclamation?

A Yes, we have the Bureau of Reclamation on the Missouri River. We have a coordination contract with them, which is again, a hydraulic coordination of the water in the Missouri River, and there are headwater benefits there from their storage of water in Canyon Ferry, that enhances our operation downstream from that storage.

Q What about cooperatives in the State of Montana? Does the Montana Power Company have relationship or agreements with any of these organizations?

A Well, we wheel power from the Bureau of Reclamation and the Bonneville Power Administration to several, and there are several others that we either provide all or part of their power resources from our own.

Q Now, you said you "wheeled" power. What do you mean by that?

A Well, we agree to move power over our transmission network for a third party. We are a third party in the transaction. It will be a customer of the Bureau, for instance, and we wheel the power from the Bureau to the customer. Contractually, that's the way it's arranged.

Q Well, we've gone into the organizations here that you belong to with due regard to the cooperation and coordination between the various organizations making up a part of these various organizations. Basically, can you summarize the reasons for the necessity of cooperation and coordination with other utilities in the Pacific Northwest?

A Well, it enables us to provide a more reliable service to our customers in minimizing the costs of providing such service.

Q What about the use of resources?

A It enhances the use of resources. The utilization of surpluses in our or other parties' resources to stall or delay building of additional resources -- one party may be able to buy some for a period of time. These coordinated planning activities normally enable you to build a somewhat larger unit with the economies of scale and operating, and so forth, savings in that area.

Q What about the environmental impact utilities may have? What is the effect of these cooperation-coordination activities?

A Well, I think it would enhance it, because it should result in fewer installations, or, in the case of transmission, perhaps building fewer transmission lines because you may be able to build a more husky line and build two instead of having three or four smaller ones, that type of thing.

Q Do you think you could draw the conclusion it will minimize environmental impact?

A It certainly should.

MR. SHENKER: I want the record to show that that was a leading question of the first order, to which no objection was entered at this time.

HEARINGS EXAMINER: The record will so show.

MR. BELLINGHAM: Purely in the interests of time and an effort to move this proceeding forward so we get through this summer, I will, from time to time, offer leading questions, I suspect. Sir, we are going to move on now to another field. I don't know whether you want to take a break at this time or not?

HEARINGS EXAMINER: Let's take a ten-minute break.

(BRIEF RECESS).

(Following a brief recess, the hearing reconvened at 11:05 A.M., on May 28, 1975.)

HEARINGS EXAMINER: Very well, Gentlemen, if you are ready, we will go back on the record. Mr. Bellingham, you may proceed with your Direct Examination.

Continuation of Direct Examination of Mr. Hofacker by Applicants

By Mr. Bellingham

Q Mr. Hofacker, I now hand you what has been marked as "Applicants' Exhibit No. 2," and ask you what that purports to be.

A It indicates the general service areas of the five companies that are participants in this project.

Q And when you say "service areas," what do you mean?

A The areas in which they sell power to customers.

MR. BELLINGHAM: I might mention that this was originally to be introduced through Mr. Goldhammer, but because he was not able to appear as scheduled as a witness, I am attempting to introduce this through this witness.

Q Was this particular exhibit, Applicants' Exhibit No. 2, prepared by or under your supervision?

A Yes, sir.

Q By whom was it prepared?

A It was prepared in our drafting department with specific instructions to them by Don Gregg and those people that work with him.

Q And do these particular departments that you mentioned come under your supervision?

A They do.

Q And authority?

A Right.

Q And insofar as you know, is the document, Applicants' Exhibit No. 2, true and correct?

A To the extent it could be done in this case it is. I think it's as accurate as you're going to find.

Q Well, as far as you know, is it true and accurate?

A Yes, sir.

MR. BELLINGHAM: At this time we offer into evidence Applicants' Exhibit No. 2.

MR. SHENKER: I don't have any objections, but I just want to ask one voir dire question of the witness if I might.

HEARINGS EXAMINER: Certainly.

Voir Dire by Mr. Shenker

Q Mr. Hofacker, is this the exhibit that Mr. Goldhammer instructed your folks how to prepare and what to do?

A No, sir.

Q That's another one?

A The one that I understood he instructed had to do with the local resources. I initiated this one, personally.

MR. SHENKER: I have no objections.

HEARINGS EXAMINER: Anyone else? (No response) Very well, Applicants' Exhibit No. 2 is admitted.

Continuation of Direct, by Mr. Bellingham:

Q I will continue to flash these on the screen, the exhibits that we have, although as a practical matter, since the Board is not here, the use is diminished accordingly. Turning now to Exhibit No. 2, I would like to call your attention to the brown-shaded area marked "Montana Power." That denotes its service area, is that correct?

A It does.

Q Is that located strictly in the State of Montana, or does it embrace other states?

A It's in Montana, except for Yellowstone Park, which is in the State of Wyoming.

Q And that is in the extreme northwest portion of Wyoming, is it?

A Yes, sir.

Q Now, turning to what is marked "P.P.& L.", Pacific Power & Light, the red portion denotes its service area, does it not?

A Yes, sir.

Q And what states does that embrace?

A Well, as you can see, Northern California, parts of Oregon, Washington, Idaho, Montana, and Wyoming.

Q Turning next to "P.G.E." -- what does that denote?

A That's essentially the --

Q No, the initials?

A Oh, Portland General Electric.

Q And that's one of the applicants in this case?

A Yes, sir.

Q And what state is its service territory in?

A Oregon, the vicinity of Portland.

Q And Washington Water Power?

A In the State of Washington and northern Idaho. The blue color on there.

Q And what about Puget Sound Power?

A Out in the western portion of the State of Washington.

Q I believe I have no further questions in connection with that. Is there anything further that you'd like to bring out?

A Nothing that I can think of.

Q Do you recall Mr. O'Connor's testimony regarding outages in the Montana Power system during last winter?

A Yes, sir.

Q He testified relative to Ryan and Kerr.

A Yes, sir.

Q And Ryan is located where?

A In Great Falls, on the Missouri River.

Q And Kerr is located?

A In the vicinity of Polson, Montana.

Q Do you recall certain outages that occurred during last winter as far as these plants are concerned?

A Yes, sir. We had a fire at Ryan that knocked the whole plant out, portions of it, for some days and weeks, and some of it we're still repairing. The Kerr plant also went down because of moisture in the lubrication of the equipment. We got Kerr back on temporarily with a makeshift arrangement that later we corrected. There were other outages that occurred right in the vicinity of these two that could have caused us considerably more trouble had they occurred simultaneously, or at the time that Ryan and Kerr were being down.

Q What time did the Ryan outage occur, as far as the approximate date?

A Well, I gathered this from the dispatcher, from the records. I will read right from what I gleaned from our dispatcher's records as to -- and the plant records at the site as to what happened and when. I will get down here to the Ryan -- I see that the Ryan is not on here. They have several others, but not the Ryan plant on this, but it went down shortly before Christmas.

Q And what about the other outage at Kerr?

A That went down on the 24th day of December -- a leak in the cooling coils got water into the oil. We got it back on temporarily three days later.

Q Are there any others of somewhat significance?

A As I alluded to before, the Corette unit had been down on the 17th of December and back on on the 18th. There was a problem in the precipitator. Had that occurred two days later when the Ryan fire occurred and the Kerr unit went off, we could have had real serious problems. I'm not sure that we could have gotten all of the resources necessary to prevent curtailing of some sort. Again, --

MR. SHENKER: Excuse me. Mr. Examiner, we move that the last portion of the answer be stricken as not responsive to the question.

HEARINGS EXAMINER: It will be stricken.

A The Corette unit was off again in January due to a rupture in the boiler water wall, and back on again two days later, and these other instances where it was off for a leak here and there anywhere from a few hours to a few days. We had another pending case of trouble which is constantaly potentially hazardous, and that's a quick freeze up on the Missouri River -- that reduces our capability on the plants downstream from that area which is south of Great Falls.

Q At such times do you on occasion put the interruptable customers on notice regarding their power?

A We do when it appears that this may take place and that we might possibly not have enough resources that we can gather from outside to take care of their loads at that time.

Q And what do we mean by interruptable customers?

A By contract they get a somewhat reduced rate of paying for that power, in return for our being able to interrupt them if we need the reserves represented by that interruptable load. We include interruptable loads in our reserve capability.

Q What are other contingencies that have occurred during the past winter that you have not testified to?

A There could well have been some, but I cannot recall at the moment.

Q Well, are there any other what you might call serious ones that you might testify further on?

A No.

Q All right. Now, during these periods of time that these particular plants were down, what did you do as far as the power that you lost as a result thereof?

A Through our power supply department and the dispatchers working in that area, we contact our neighbors if we do not have adequate generation left with those units down to take care of our load.

Q You say you contact who?

A Our neighbors -- the ones that we're interconnected with, the other utilities.

Q Are these the ones that you testified to previously?

A Yes, sir.

Q And including the four other applicants in this case?

A Yes.

Q And what happens when you notify them relative to the problem?

A To the extent they can help us to carry our load, they do.

Q Did this occur during the last winter months?

A I am certain that it must have.

Q Now, then, there has been frequent reference to the word "megawatt" by Mr. O'Connor and the attorneys who interrogated him. I think he indicated what the meaning was, but in order to get a more clearer perspective as to the quantity, or whatever you might term it, to a megawatt, I wonder if you could tell us, for example, during 1974, some of the loads for various cities in this state in your customer area used in terms of megawatts.

A Well, Billings, as of this past winter, was about 96-97 megawatts when you excluded Exxon and the refineries. When you added those in, it was approximately 130 megawatts.

Q Would this be peak or energy?

A This would be peaks.

Q Now, what do you mean by 97, 98, 96 and so forth -- that the city actually used this?

A That's right. This is from our records as far as power demand over this month -- I believe it was the month of either December of January.

Q All right, what about other towns?

A Butte, excluding the Anaconda Company, is between 30 and 35 megawatts, I believe, and when you add the Anaconda Company of about -- what we experienced with them this past winter, at least -- 110, I think it makes them about 140 some megawatts.

MR. SHENKER: Is this also peak?

A Peak, yes, sir. The Missoula load was just under 90 megawatts, as I recall, and when you added Hoerner-Waldorf and the lumber industry and so forth around there, I think it added up to about 120 megawatts. I think Helena -- I'm not sure I remember what Helena might have been -- I think 27 or 30, something in that area.

Q Could it have been a figure of 37?

A 37 -- yes, sir, I think this is correct. Maybe if you took in the AS&R, I think it went up to closer to 45 or 47 -- this is peak again.

Q What? When it included the what?

A I think East Helena, the AS&R, in the whole Helena area -- I think it adds another 10 megawatts, something like that.

Q Any other towns? Great Falls? Have you testified to that?

A No, I have not. Great Falls is slightly under 80 megawatts, I believe. No -- I think 75 to 80 and another 10 for the industrial road there.

Q What would that include?

A The Anaconda Company operations.

Q Now, let us move on and into the background of 3 & 4. I think Mr. O'Connor testified as to the names of the five company applicants. Do you recall when the application was made for Colstrip 3 & 4, generally?

A You mean the application to the Department of Natural Resources?

Q Yes.

A June 6th of 1973.

Q I wonder if you would briefly tell us the background insofar as the participants are concerned and the approximate dates leading up to the application.

A In December of 1971, the five companies got together in Spokane, as we frequently did. The five companies are the five participants that are in the plant now, by the way -- to exchange data on our loads as we foresaw them and the resources that we might need to cover those. When we tallied up the five companies, it was rather obvious that 1978 and '79 had a serious deficiency in primarily energy requirements. The energy requirements, I believe, as counted at that time, were in the area of about 600 megawatts in the '78-'79 season, and the season I am referring to is from July 1 through June 30th of the following year. I believe the energy the next year was close to 1100 megawatts deficient. This had resulted in delays in getting resources. I believe one of the serious ones, the major one, perhaps, that prompted this, as I recall, was the loss of a nuclear plant that the Eugene Water Board, the City of Eugene, had planned, and the electorate voted a moratorium of some five years or more. I think that might well have been the unit that filled this void that existed. In discussion at that meeting we looked around at what would appear to be the most logical and most timely place to obtain resources. As of that time, we already had the Colstrip site established and were proceeding with Units 1 & 2. The suggestion was made that that might be a logical place to look to as to the feasibility, both electrically and economically, getting units on line to be available in this '78-'79 period. We agreed at that point that we should make some reconnaissance type study as to what sizes of units ought to be, what transmission was necessary, what electrically was compatible with the Montana Power Company system insofar as not upsetting its stability with the additional transmission that would be necessary. So we then proceeded with several, as I've said before, reconnaissance studies, which is the normal procedure in planning. You have an idea that seems to have possibilities, so you make these studies to try to firm it up. We made many of these studies, economically and electrically, and it appeared that the project had some reasonable possiblity of meeting the need, so I believe it was in August of 1972 that four of the five companies signed a letter of agreement to pursue further with the studies. We did that and in December of 1972 we summarized the results of our studies, and it seemed like it still was a going concern. This was reported to our management, as I recall, either in late December or early January. I think the letter of intent was renewed in January of '73 to continue studying and to also investigate who might prepare an environmental analysis for the project, who might be the one to prepare engineering details necessary for the environmental analysis, as far as the transmission, and as to whom should do the engineering necessary in the generation area. We interviewed at a meeting several potential concerns in this area. This included Ebasco; it included Westinghouse Environmental Systems; it included Charles T. Main; United Engineers -- I believe those are the four. We had decided among those on the study group that probably the most logical as far as the generation area was Bechtel, because they were on the site and had come a long way down the road as far as knowing the requirements that would be necessary to put a plant at Colstrip. I believe in about April we decided we ought to go ahead and try to get a permit to build this plant. We had in the meantime informed Westinghouse Environmental Systems and Charles T. Main to work jointly, Charles T. Main doing the engineering that was necessary in the transmission area, and Westinghouse to do the environmental analysis of this project; and as I say, in April, I believe, we decided to go ahead with this project. We made a presentation to the Governor and a majority of the State Departments that would be interested in this here in Helena in May. The principal purpose of that meeting, as Mr. O'Connor stated, was to urge or to impress upon the State people the time requirements as we saw them, because the initial planning and studies had not contemplated the length of time that the siting statute brought into being in March of '73, I believe, and this created a time problem. We asked that consideration be given towards the possibility of granting a permit by May of 1974. In July of 1973 Pacific Power & Light became a party to this project, and has been since.

Q You mentioned four companies prior to that time, and I gather you meant the four applicants, with the exception of Pacific Power & Light?

A Yes, I did.

Q Now, to go back to the time when the five participants got together in late 1971, or thereabouts, I think you indicated what the forecasts indicated at that time relative to the future. Now, there was an increase as far as the prognosted deficit from 1978 to the next year, is that correct? I think you indicated what they were.

A I think I understand the question you put to me --

Q Well, as far as your planning was concerned, you can see that there was a deficiency in energy resources of the five companies?

A Of about 600 megawatts, as I recall the numbers, in -- for the 1978-79 period, and 1,000 to 1,100 megawatts in the 1979-80 period. This was in energy.

Q Could that have been more than the 1100 figure?

A Well, it would require more than 1100 megawatts of capability to do this, to produce this. At one time we needed about 1400 megawatts to take care of the deficiency, yes.

Q What is the 1400?

A It's now two 700 megawatt plants. At that time we hadn't decided what the size of the plants were, or would be.

Q What is the difference between the 1400 you testified to and the 1100?

A Well, the energy capability of an installation is considerably less than the peak capability, because you have maintenance, you have down time, and you have certain spinning reserve requirements to assess against that particular plant.

Q Then the 1100 was energy, is that right?

A That's right, sir.

Q And the 1400 was peak?

A That -- the 1400 was the capability of the generation necessary to carry that.

Q Fine. I now hand you what has been marked as "Applicants' Exhibit No. 3," and ask you what that is.

A That's a compilation of the loads and resources of the participants for the periods 1975-76 to 1985-86, excluding the resource capability of Units 3 & 4.

HEARINGS EXAMINER: What was the last part of his answer?

MR. BELLINGHAM: "Excluding the resource capability of Units 3 & 4."

Q In other words, this particular exhibit, and I'm referring now to Applicants' Exhibit No. 3, is the forecast of the loads and resources of the participants in 3 & 4, excluding Units 3 & 4, is that right?

A Yes, sir.

Q By whom was this prepared?

A This was prepared by our planning section, utilizing information provided by all the participants.

Q And the approximate date of this particular exhibit is what, do you recall?

A I would think sometime between mid March and mid April, I believe.

Q Could it have been around the first of April of '75?

A Yes. Yes, of this year.

Q You have indicated that as far as the other participants are concerned, you got the information that's made a part of this particular exhibit from them, is that right?

A Yes, sir.

Q And who did that?

A Who compiled this thing, are you asking?

Q Who obtained the information from the other participants? What section of the Montana Power Company?

A The planning section received it.

Q Fine. Then this particular exhibit is based upon the participants' figures given to you?

A Yes.

Q What about Montana Power Company's figures?

A Well, it's our own figures that were put in there that were derived by the planning department, in conjunction with the other --

Q Have you had opportunity to review Applicants' Exhibit No. 3?

A I have.

Q And is it true and correct as far as you know?

A Yes, it is.

MR. BELLINGHAM: We'll offer into evidence Applicants' Exhibit No. 3.

MR. SHENKER: If the purpose of the offer is to show presently what the applicants say their projected loads and resources will be from now through 1986, of course we object to that, because it's a rather premature offering. We would have to know from each of the applicants how they put together their loads and their resources, and be able to examine each of the applicants in order to determine the validity of any showing that they would make as to their loads and resources. After they have so testified, and Mr. Hofacker, if he's the one, on behalf of the Montana Power Company, testifies as to their own company's loads and resources, then a compilation would be appropriate, but at this time it's premature. If, however, the offer is to show that at the meeting that they had in December of 1971 that this was the resource and load picture that they were looking at, then as an offer as to what their state of mind was at that time, I would not have any objection to the exhibit for that limited purpose.

MR. BELLINGHAM: Well, of course, our purpose is to show the forecast for the loads of the five companies for the period indicated in the particular exhibit. Now, as far as not having the other applicants on the stand today, I can assure Mr. Shenker, as he knows, that the particular parties involved in the forecasts of loads and the resources of the other companies will be brought to the stand later, but we do not feel that is a necessary requirement relative to the foundation as far as this particular exhibit is concerned; that if there is a weakness in it, that is something that is apparent on its face, but certainly, as far as the preparation of the exhibit is concerned, Mr. Hofacker has testified as to what the background is and what the story is regarding it, and that it is sufficient, as far as foundation is concerned.

MR. SHENKER: Well, it certainly is not sufficient as far as foundation is concerned for the very reasons that there is an evidentiary concern as to foundation. We can't possibly cross-examine Mr. Hofacker on the basis of Exhibit 3 as to the accuracy of the load forecasting and resource planning and availability of the other four applicants. I know that he will tell me that he does not know the details of how the other applicants put together their loads and their resources and their forecasts. If the Examiner wishes, I would voir dire the witness to establish that on the record. All that this witness, I'm sure, can tell me that they carefully put together the figures that were given to him by somebody else, but it's the somebody else who would have to establish the validity of those figures. Therefore, the offer of this exhibit for the purpose of showing the present forecast of load and resource capability of all five of the applicants taken together is starkly premature. There is no point at this stage in offering a compendium document before we know the validity of the inputs to the document. That's like offering an exhibit that says, "We have five oranges, and they all have a certain amount of juice potential, but we can only tell you what one of the orange's juice potential is." We want to know the other four orange manufacturers as to what their statements are on the juice potential, and I think that at this stage, the offer would be not only without foundation, impossible for cross-examination to proceed, and premature, but I think it goes beyond the state of the evidence at this point; and again, I repeat my willingness to have no objection to this exhibit for the limited purpose of showing what the state of mind of the five applicants was when they gathered in Spokane, Washington, in December of 1971, which is the state of the record and the description at this time.

MR. BELLINGHAM: If this presents a problem to the Hearings Examiner, I might suggest this: that it could be introduced subject to later on tying it in with the testimony of the other applicants.

HEARINGS EXAMINER: I will introduce the exhibit subject to having testimony from the other applicants as to their input into this exhibit, if it's tied in. If it's not tied in, I'll entertain a motion subsequent to that. Perhaps we can expedite it a little at this point.

Q (Mr. Bellingham resuming) Now, to make the picture entirely clear, this particular exhibit excludes any impact upon load forecasts as far as Units 3 & 4 are concerned, does it not?

A Yes, sir.

Q Now, then, you will see at the top of the exhibit various years, commencing with 1975-76, the next one being 1976-77, and so forth, and I assume that the columns under each of these years are pertinent to the particular portions of those years referred to, am I correct in that?

A Yes, sir.

Q What particular period of time during those particular years are we concerned with as far as this exhibit is concerned?

A July 1 -- for instance, under the "1975-76" -- July 1, 1975 through June 30, 1976.

Q Now, then, let us turn ourselves to the various columns. You first have a column on the extreme lefthand side denoted "Peak MW." What is meant by that?

A Megawatts.

Q And it refers to peak?

A Yes, sir.

Q And you have previously testified regarding this particular subject, have you not?

A Yes, sir.

Q All right. Now, then, the first column under "Peak" is denoted what?

A The first line is "Total Systems Resources."

Q "Total System Net Resources." What does that mean?

A That's the total peaking capability of generation and purchases available to the five participants.

Q Could there be anything else that makes up that particular group, "Total System Net Resources"? What about exchange agreements?

A Well, I classed that in with the purchases, so --

Q So it's all the resources available to these five applicants?

A Yes, sir.

Q Now, then, for the period of 1975-76 you have the figure of what?

A 13,462 megawatts.

Q And does that figure increase from year to year?

A It does. Going across, for example, by 1979-80, it is increased about 2,400 more megawatts, making a total of 15,876 megawatts, and corresponding increases on out through the 1985-86 period on the righthand side.

Q This particular exhibit covers the period from 1975-76 to 1985-86, does it not?

A Yes, sir.

Q Directing your attention to 1979-80 and 1980-81, you have figures there regarding the resources of the five applicants, do you not?

A Yes, sir.

Q And those are 15,876 to 16,377, respectively?

A Yes, sir.

Q And those figures are exclusive of and do not include Units 3 & 4, is that correct?

A Yes, sir.

Q Now, turning to the second line under "Peak MW", it reads, "Total System Load;" now, what is meant by that?

A That's the total demand we would expect on our combined systems.

Q When you say "demand" what do you mean by that?

A Demand for power at a particular time.

Q Starting with the year '75-'76, what demand or load do you show?

A Well, in 1975-76, it is 10,955 megawatts.

Q And does that increase?

A It does; in 1979-80 it's 13,969 megawatts.

Q And what figure does it end with?

A In 1985-86, at 19,598 megawatts.

Q Now, the next line under "Peak" is denoted what?

A It says, "Reserves Above Total Load."

Q What is meant by that?

A That means the capability that the participants must have over and above that load in order to reliably carry that load when it occurs.

Q And for the period of 1975-76 you have a reserve of total load of how much?

A 1,001 megawatts.

Q And as far as the year 1985-86, what do you have for reserve?

A 2,962 megawatts.

Q So the reserves go up over the life of this particular exhibit the same as the other items, is that correct?

A Yes, sir.

Q Now, then, as far as reserves are concerned, how are those figured?

A Well, one method of figuring them that we have been subject to, by contract, under the Pacific Northwest Coordination Agreement -- and those reserve stipulations are currently being negotiated, but as the contract now stands and has since it was signed in the '60's, the determination of the amount of reserves starts with the assumption that all utilities, public, private and otherwise, in the Pacific Northwest Coordination Agreement was one single utility, and based on the probability that the load would exceed the capability only once in twenty years, that reserve can be calculated when you take the characteristics of the generating units that are providing the resources to carry that load. That is one lump sum of reserve necessary. Then there is an allocation method stipulated in the contract whereby this one lump sum is apportioned out to the various participant utilities to the contract in accordance with their loads and their types of generation, so that all utilities have essentially the same risk of inability to carry load at some particular time.

Q Now, as far as Montana Power is concerned, approximately what percentage of your total do you utilize in figuring your reserve?

A Well, at the present time, it's, I believe, about 12%.

Q 12% of what?

A Of our peak load.

Q And for planning purposes, does this particular figure increase over the years in the future?

A Yes, sir.

Q Will you explain that?

A Because your demands on your system increase over the years, so to maintain essentially the same reliability, you add reserves to carry. For planning purposes, for the Montana Power Company at this time it increased about 1% a year up to a maximum of 20%.

Q And what happens after that?

A It stays at 20%.

Q What is the reason for the increase?

A As I stated, the reserves are under negotiation, and we anticipate that our exposure, if you want to term it that, by contract to carry reserves might be as much as 20% as we proceed to add thermo-generation upon our system.

Q You mentioned thermo-generation, and that phrase has been used -- what do you mean by thermo-generation?

A Steam -- you use a fuel of some sort to create steam to turn turbines to turn the generator to -- it results from heat.

Q Okay, you mentioned fuels -- what kind of fuels can be used?

A Coal, oil, gas, nuclear.

Q And any generating plant fired by these particular substances, coal, oil, gas and nuclear, can be and is designated as a thermal unit?

A Yes, sir.

Q As distinguished from what type of generation?

A A hydroelectric unit. We don't normally think of gas turbines as a thermal unit, but I guess in a strict sense they are.

Q When you say hydro units, what do you mean by that?

A Those where we generate electricity through the use of falling water.

Q Now, then, the dams that have been previously testified to as being a part of the Montana Power system would be a part of the hydro system?

A Yes, sir.

Q And I believe you indicated that you do not need as much reserve as far as hydro generation is concerned as with thermo, is that the statement you made?

A I don't recall making that statement, sir.

Q All right, then, what is the story relative to hydro?

A Hydro requires less reserve for the same reliability, because the units, we can say, are simpler, less complicated, fewer things can go wrong with them, they're quicker to take on and off the line -- I guess that sort of covers it. And I guess there's a long history of experience, so most of the bugs are out of them.

Q Now, when we talk about reserves, are we referring to reserves as to peak or reserves as to energy?

A These are reserves as to peak that you would call "forced outage reserves."

Q Now, then, let's turn back to Exhibit No. 3, if we might, and you have indicated what that third sentence means, "Reserves Above Total," what that constitutes. What is the next line?

A That's the Surplus or Deficit Over the Total Load, Plus Maintenance Plus Reserves.

Q There can be a surplus or a deficit, is that correct?

A Yes.

Q Those figures indicate a surplus in what fashion? In following that particular line --

A Well, the negatives, or deficits, are indicated in parentheses.

Q What about the surplus?

A It's just the number without any parenthesis.

Q It's the naked number, itself, is that right?

A Yes, sir.

Q Now, is this system utilized throughout the various exhibits that we propose to put into evidence through you?

A Yes, sir.

Q Is this a normal way of indicating a deficit?

A Yes, sir.

Q And the normal way is the figure in parentheses?

A Yes, sir.

Q Now, what do you mean by this particular statement or indication, "Surplus or deficit over total load, maintenance and reserves?" What does that figure represent?

A First off, as your systems expand, more units on line, it means that some units are going to be down for maintenance at most any time of the year. At one time, we, in our system, would plan our maintenance to be in the summer when our loads were down, but now there is some amount of maintenance that we have to take care of on our system during the winter months, as I believe is true of the rest of the participants. So this number -- for instance, in the 1975-76, of 1506 megawatts, is that surplus that would be available for sale or what-have-you, by the participants, over and above that required to carry their loads under normal types of forced outages, maintenance procedures, and so forth.

Q Now, then for the year 1975-76, you have the figure following "Surplus or Deficit over the Total Load, Maintenance and Reserves," as what? What is the figure for that year?

A 1,506 megawatts.

Q Where is that?

A I missed part of your question. Would you ask me the question again, sir?

Q What is the figure on 1975-76 as far as the surplus or deficit is concerned?

A What is the figure?

Q Yes.

A For peak it's 1,506 megawatts.

Q Fine. Now, for the figure for 1976-77?

A 1,082 megawatts.

Q And it goes up the following year for '77 and '78, doesn't it?

A Yes, sir.

Q What is the figure there?

A 1,432 megawatts.

Q And continuing on up the line to '79 and '80? A figure of what?

A 265 megawatts.

Q And that is 265 surplus, is that correct?

A Yes. That's right.

Q As far as the five participants are concerned for that time period?

A That's right, 265 megawatts of the 15,876 megawatts in the first line is surplus, yes, sir.

MR. SHENKER: Excuse me, would you say that again, Mr. Hofacker?

A 265 megawatts is that portion of the total system resources of 15,876 megawatts that is surplus.

MR. SHENKER: Thank you.

Q Now then, calling your attention to the year 1980-81, what is the figure listed there as surplus or deficit?

A It shows a deficit of 332 megawatts.

Q Is that the first year where a deficit is indicated by the Exhibit No. 3?

A Yes, sir.

Q What about the year 1981-82?

A It increases to 1,041 megawatts.

Q And the next year it goes down to what?

A 723 megawatts.

Q Why the decrease there, do you know?

A There are some additional resources coming on, that were scheduled -- I'm not sure which ones they are, but you can glean the increase in resources from the first line, going from 1981-82 of 16,670 to 1982-83 of 18,105, for an increase of about 1400 megawatts of resource.

Q So that in turn reduces the deficit, is that right?

A The increase of resource was greater than the increase of load; yes, sir.

Q Now, then, '83 and '84? The figure moves back up to what?

A 1,833 megawatts.

Q And '84-'85 the figure is?

A 2,780 megawatts.

Q And '85-'86?

A 1914 megawatts.

Q There's a decrease in that last year?

A Yes, for the same reason as I explained in the previous one.

Q Now, then, the period here indicated, up to '85-'86, is this the customary number of years that is used in this type of load forecast?

A We have been doing this for some time, of approximately ten years, although any of us can project on out beyond that, but the ten years is where you tend to concentrate.

Q Now, then, we will next move to the other column.

MR. BELLINGHAM: I will be a few minutes on this, if you want to break now.

HEARINGS EXAMINER: It's your pleasure. Continue if you want to.

Q As far as the next major category on the lefthand side of Exhibit No. 3, you have the words, "Average Energy Megawatts," is that correct?

A Yes, sir.

Q And this is the meaning of energy that you previously referred to?

A Yes, sir.

Q The first column under there states what?

A "Total System Resources."

Q "Net Resources," doesn't it?

A It should read "Net Resources."

Q It does in the exhibit. Now, then, is this the same type of resources that you referred to up above when we were discussing peak?

REPORTER: I am having trouble hearing.

HEARINGS EXAMINER: We have a lot of outside interference. Why don't we adjourn until 1:30.

(LUNCHEON RECESS, 12:00 NOON)

(FOLLOWING THE LUNCH RECESS THE HEARING RECONVENED AT 1:30 P.M. ON MAY 28, 1975)

HEARINGS EXAMINER: Gentlemen, prepare to proceed. Mr. Bellingham, before you proceed, Mr. Crotty has requested to bring up a matter before we get into the discussion this afternoon. If no one has any objections, go ahead Mr. Crotty ---- Mr. Warner, pardon me.

MR. WARNER: At this time, Mr. Hearings Examiner, we would like to register an objection to any testimony - any further testimony -- or any testimony to be taken as to things occurring outside the state line. We'd like to refer to the criteria of the Siting Act and particularly it's our position that the main criteria of the environmental compatibility of public need should be determined in the best interest of the state of Montana. There are various references in the Siting Act as to the minimum of adverse impact on the citizens of this state, a description of reasonable alternate locations to be provided. The Board must find and determine the basis of the need for the facilities, and the Board certificate should contain a statement as to the alternatives to the proposed facilities. Undoubtedly, these provisions of the Siting Act are subject to varying interpretations. At the present time, nothing has been indicated to me showing consideration of alternatives for locations outside the state of Montana. Therefore, it's our position that if we are going to consider needs outside the state, some consideration should be given to locations outside the state as well. We want to register an objection at this time to be entered into the record as to the need outside the state.

HEARINGS EXAMINER: Very well, Mr. Warner, the record will show your objections. Your objections will be overruled, but they will be in the record.

MR. WARNER: Thank you.

HEARINGS EXAMINER: Proceed Mr. Bellingham.

MR. BELLINGHAM: Thank you, sir. I think when we concluded this morning, we were interrupted by alot of noise outside, among other things, I had just turned to average energy, and I think rather than going back and trying to reconstruct the matter, if it would be permissible, to move that anything referring to Exhibit 3, on average energy, be stricken and I'll start over again. I think that's the simpliest way of handling it. I don't think I even got a question out.

HEARINGS EXAMINER: Well, if you are repetitious -- however you want to proceed is fine.

Continuation of Direct Examination of Roger Hofacker by Mr. Bellingham:

Q Taking up the column on the left-hand side designated "average energy", I think you indicated that this particular section of the Exhibit refers to average energy as distinguished from peak, is that correct?

A Yes sir.

Q And the first line underneath that particular heading is denoted what?

A Total System Net Resources.

Q Now, is this the total system net resources of all of the applicants?

A Thats right, the total of all of the five applicants' resources.

Q Insofar as average energy is concerned?

A Yes sir.

Q Now, the year of 1975-76 has a figure of what?

A 6,336.

Q And here again that increases with each year as we go down the column -- or across the column -- is that correct?

A Yes sir.

Q And the last one for the year of 1985-86 -- the one I refer to as the last figure -- is what?

A 11,148 megawatts.

Q Now, then, I noticed that the figures pertaining to average energy for each year are considerably below the same figure insofar as the identical year is concerned when it relates to peak, is that right?

A Yes sir.

Q And, why is this?

A Because the energy capability, which is the amount -- the total energy they can produce in a period of time is less than the peak capability over a year's time, and these are years at a time.

Q All right, now the next line refers to what?

A The total system load of the five companies.

Q And this I see goes up also, is that correct, every year?

A Yes sir.

Q The first year, 75-76, contains the figure what?

A 6,455 megawatts.

Q The last year has the figure of what?

A 11,516 megawatts-

Q Now then, the next column is surplus or deficit over total load making in reserve, is that right?

A Yes sir.

Q Now, I noticed you do not have any indication under average energy as you do under peak above as to the reserve above total load, do you?

A We do not. The statement you made is right, however I answer it.

Q Do you find I'm somewhat leading with you?

A Well --

Q Why don't you have any designation of reserve ----

A Because ---

Q of average energy?

A The first line says total system net resources, and that has taken care of the maintenance -- the energy loss during maintenance -- and the energy reserve for the units -- for the resources.

Q As far as surplus, or deficit, is concerned, the bottom line, for the year of '75-'76, what is the indication there as far as participants are concerned?

A There was a deficit anticipated of 87 megawatts.

Q What about the year '76-'77?

A A surplus of 64 megawatts.

Q And then the next year?

A A deficit of 46 megawatts.

Q Why the change in there, do you know?

A I believe it has -- it must have to do with the resources that come on line that exceeded the growth in total system load.

Q Those figures from there on out commencing with the year '77-'78 are all deficit figures, are they not?

A Yes sir.

Q And they vary from year to year, I assume, for the reason that you previously testified to?

A Yes sir.

Q It depends on the resources coming on the line?

A And the load growth.

Q Is there anything else about this particular Exhibit #3 that you would like to add?

A No sir.

Q I now hand you what has been marked as Applicant's Exhibit 3-A and ask you what that purports to be?

A That is a graphical representation of the data exhibited on Exhibit 3, and it has to do with the peak loads and resources of the participants in Colstrip 3 and 4 -- for peak, again repeating, peak load in resources.

Q This particular Exhibit, and I'm referring to 3-A, is based upon what?

A Based upon the data provided by the other four participants and our own load forecast, exactly the same data that was on the previous Exhibit, for peak.

Q And when you say previous Exhibit, you are referring to Exhibit #3?

A Yes sir.

Q Was it prepared by you, or under your supervision?

A Yes sir.

Q Do you believe it's true and accurate?

A Yes sir.

Q Now this particular Exhibit excludes also Unit 3 and 4, doesn't it?

A Yes.

Q They are not taken into consideration?

A They are not.

Q We now offer into evidence Applicant's Exhibit 3-A.

MR. SHENKER: Our objection to Exhibit 3-A will be the same as our objection to Exhibit 3. The Exhibit 3-A is just the graphic representation of the top half of Exhibit 3, and it bears, it seems to me, the same problems -- we can't cross-examine this Exhibit because we don't have the applicant here to cross-examine. All we can do is to find out from Mr. Hofacker if he did a nice careful, neat diagrammatic job of plotting on a piece of paper what someone proposed to put on it. Therefore, the offer of the Exhibit at this time is wholly premature and we don't know the accuracy of the Exhibit at this time.

HEARINGS EXAMINER: Very well, the objection will be overruled. The Exhibit will be admitted subject to having the various applicants defining their projections.

MR. WARNER: May the record also show our objection as to the needs outside the state of Montana.

HEARINGS EXAMINER: I deem you have a continuing objection to that Mr. Warner.

Q Now then, calling your attention to Exhibit 3-A, you have a bar on the left side of each group of two bars which is colored blue, I believe, is that right?

A Yes sir.

Q And what does that bar denote?

A It denotes the magnitude of the total resources of the five participants.

Q Then, immediately next to it you have a partial bar, at least forms a part of a bar, that is in yellow. What does that denote?

A That denotes the load, the total load of the five participants in that particular year.

Q And then immediately above the yellow portion denoted load, you have "reserves", do you not?

A Yes sir.

Q And what color is that?

A In red.

Q Now, for example, for the year of '75 and '76 what does this particular group of two bars denote?

A That there was a surplus of about 1500 megawatts of resources above load plus reserves.

Q Now, at the bottom of this particular Exhibit, you have the years denoted, just as you did on the other one?

A Yes sir.

Q And on the lefthand side you have a series of figures which represent what?

A Thousands of megawatts.

Q Now then, you have a surplus here insofar as resources over load and so forth is concerned, for what years?

A The years '75-'76 through '79-'80.

Q What about '80 and '81 years?

A The '80-'81 season, or year, however you want to term it, has a deficit of 332 megawatts.

Q And how did you determine that?

A By adding up the resources, adding up the loads plus reserves, and taking the difference.

Q You find in this case that yellow and red bar runs above the blue bar?

A Yes sir.

Q Indicating the difference?

A Yes sir.

Q And what about subsequent years after the year '80 and '81?

A Deficits increasing normally, except for the one year.

Q And all of those remaining years constitute deficits, is that correct?

A Yes sir.

Q Is there anything else about that particular Exhibit that you'd like to say?

A No.

Q I now hand you what has been marked as Applicant's Exhibit 3-B and ask you what that purports to be?

A That's a graphical representation of the energy portion of Exhibit 3.

Q It concerns itself, then, with the average energy - the bottom part of Exhibit 3, that correct?

A Yes sir.

Q Was it prepared by you or under your supervision?

A Yes sir.

Q Do you have reason to believe that it's true and correct?

A Yes sir, I do.

Q We offer into evidence Applicant's Exhibit 3-B.

MR. SHENKER: We object on the same grounds as with respect to Exhibit 3 and 3-A, and we also note for the record the impropriety of showing on the screen an Exhibit before it is received in evidence. Under the circumstances of this one, I didn't object, but I think that's not the way to conduct the offering of exhibits.

HEARINGS EXAMINER: Very well, I'll make the same ruling, it will be admitted subject to the respective other applicants putting -- or each applicant putting in their need and connecting it up.

Q Turning to Exhibit 3-B, you have a series of graphs, or bars I should more correctly describe them as, just as you did in 3-A, do you not?

A Yes sir.

Q The bar on the left of each group of two bars is colored blue, and what does that represent?

A The total energy resources of the five participants.

Q The bar immediately to the right of the blue is colored yellow, what does that represent?

A The total load of the five participants.

Q And this exhibit, just as in the case of the previous exhibits excludes Units 3 and 4, I believe, is that correct?

A Yes sir.

Q For the year 75 and 76, what do those bars indicate?

A A deficit of 87 megawatts of average energy.

Q You have the years, here again, down below and on the left-hand side you have a series of figures, which represent what?

A Thousands of megawatts.

Q When the yellow line is higher than the blue, that indicates what, a deficit or a surplus?

A A deficit of resources.

Q For the year '76-'77, what is the end result of the bar configuration?

A A surplus of 64 megawatts.

Q What about the remaining years, that is, from '77 to '78 through '85-'86, insofar as the designation of deficits or surplus?

A Deficits every year.

Q Is there anything else about that particular exhibit that you would like to bring out?

A No sir.

Q I would like to now hand you what has been marked as Applicant's Exhibit 4, and ask you what that purports to be?

A It's a tabulation of the total loads and resources of the five participants, including the Units 3 and 4.

Q In what respect does it differ from previous Exhibit #3?

A Only by the increased capability of resources resulting from the contribution of Units 3 and 4.

Q In what manner does this particular Exhibit show this contribution of Units 3 and 4?

A By increases in the total system net resources.

Q What years does that increases take, as far as Units 3 and 4, take place?

A In the years 1979-80 and in '80-'81.

Q Does that continue thereafter to include the resources represented by 3 and 4?

A Yes sir.

Q Turning to the first group marked "peak", we have various designations just as you had in Exhibit #3, is that right?

A Yes sir.

Q The first one is denoted "total system net resources"?

A Yes sir.

Q Would you testimony relative to that particular grouping be the same as it was when applied to Exhibit #3?

A Yes sir, except for the increased capability through Units 3 and 4.

Q And for 1975 and 1976, you have a total system net resources of what?

A 13,462 megawatts.

Q When you compare the first four years, that is, for the period of '75-'76 through '78-'79, are those figures the same as are found in Exhibit 3?

A Yes sir.

Q For what reason?

A Because #3 and #4 -- neither are in operation during those years.

Q When you come over to the year of '79 and '80, you have a total resource figure there of how much?

A 16,576 megawatts of peak.

Q In Exhibit 3, that was reduced, was it not?

A Yes sir.

Q I assume that the difference would be the addition of Unit #3?

A Yes sir.

Q In total resources?

A Yes sir.

Q What is the total system net resources for the year '85-'86?

A 22,046 megawatts of peak.

Q Turning next to the second line, total system load, would this be the same testimony that you recently gave as to the definition of that in connection with the same line on Exhibit 3?

A Yes sir.

Q The total system load for the year of '75-'76 is what?

A 10,955 megawatts of peak.

Q That builds up to a load of how much in '85-'86?

A 19,598 megawatts of peak.

Q Here again, you have reserves above total load, you see that?

A Yes sir.

Q I assume that your testimony regarding that would be the same as you gave regarding the same line in Exhibit 3?

A Yes sir, except for the increase in reserves when you bring on Units 3 and 4.

Q The last reserve figure you have here for the year '85-'86 is what?

A 3,027 megawatts of peak reserve.

Q Your next section --

MR. SHENKER: Excuse me, Mr. Bellingham. Mr. Davis I had to be nit-picky about such formalities, but there's been an awful lot of testimony about Exhibit 4, which hasn't been offered yet. I think that's a little presumptuous.

MR. BELLINGHAM: Have I not offered it into evidence?

MR. SHENKER: No.

Q Have I asked you whether or not this was prepared by you or under your supervision?

A You have not, but it was.

Q Is it true and accurate, as far as you know?

A Yes it is.

MR. BELLINGHAM: I now offer into evidence, after having testified to it for some five minutes, Applicant's Exhibit #4.

MR. SHENKER: Same objection as with respect to Exhibits 3, 3-A and 3-B.

HEARINGS EXAMINER: Exhibit 4 will be admitted subject to the same ruling that it will be connected up.

Q I think, before we offered the Exhibit into evidence, I started to interrogate you relative to the last line under peak, did I not, which indicates surplus or deficit over total load maintenance and reserve, is that right?

A It represents that, yes sir.

Q I think we were through with the reserves, were we not. Did I interrogate you on reserves?

A You did.

Q For the year '75 and '76, what surplus or deficit is indicated there?

A 1,506 megawatts of peak.

Q That indicates a what?

A That's a surplus -- excuse me -- of resources over total load plus reserves.

Q When you come over to the year of '79 and '80, when Unit 3, you testified to, supposedly comes on line, if the application is granted, for that year Exhibit 4 indicates a what?

A Surplus of 932 megawatts of peak.

Q And a surplus continues, as far as the applicants are concerned, until what year?

A 1983-84.

Q What happens during that year?

A We wind up with a deficit of 499 megawatts of peak.

Q For the year '84-'85, what do you have?

A A deficit of 1,445 megawatts of peak.

Q And for the following year?

A A deficit of 579 megawatts of peak.

Q Do you know any reason for the difference in those last three years?

A Again, it has to do with the system load growing faster than the resources.

Q Now, let's move to the average energy section, which is found below peak, and the first line here is "total system net resources", is that right?

A Yes sir.

Q For the first year, what is it?

A 6,368 megawatts of energy.

Q It moves on up until the year 1979-80 when 3 comes on line, and what is the figure for that?

A 7,772 megawatts.

Q For the year 1980-81 when 4 comes on line, what figure?

A 8,867 megawatts.

Q What is the figure for the last year, '85-'86?

A 12,237 megawatts.

Q Here again, you have a total system load as your next designation in this particular section, and I assume that your definition of that -- your explanation of that -- would be the same as you gave for a similar designation in Exhibit 3, am I correct?

A Yes sir.

Q The last section here deals with surplus or deficit over total load maintenance and reserves, is that right?

A Yes sir.

Q And here again, I would guess the first four figures, as you previously testified, that is, the figures for the years '75 through '78 - '79, would be the same as on Exhibit 3?

A Yes sir.

Q For the year of '79 and '80, what is the surplus or deficit?

A A deficit of 503 megawatts.

Q For the year '80 and '81?

A A surplus of 117 megawatts.

Q And that is the year that Colstrip 4 is due to come on line?

A For our schedule, yes sir.

Q Assuming the application is accepted?

A Yes sir.

Q And for the year '81 and '82, you have a ---

A Deficit of 201 megawatts.

Q What is the situation insofar as subsequent years are concerned?

A Surplus in all four.

Q Is there anything else concerning that particular exhibit that you would like to testify to?

A No sir.

Q I now hand you what has been marked as Applicant's Exhibit 4-A, and ask you what that purports to be?

A A graphic representation of the tabulations in the top half of Exhibit 4 having to do with the peak loads and resources of the five participants in Units 3 and 4.

Q What does this particular exhibit indicate when you compare it with Exhibit 4?

A It exhibits in graphic form the numbers that are shown in Exhibit 4.

Q Was this particular exhibit made by you or under your supervision?

A It was.

Q Is it true and accurate?

A Yes sir.

MR. BELLINGHAM: We offer into evidence Applicant's Exhibit 4-A.

MR. SHENKER: Same objection.

HEARINGS EXAMINER: Same will be admitted under the same rules in the same circumstances.

Q Referring you once again to Exhibit 4-A, on the lefthand side of each group of two bars as they are shown in this particular exhibit, you have a blue line, or I should say bar, in the early years, do you not?

A Yes sir.

Q What does that show?

A It represents the total resources available to the five companies.

Q And then --

A of peak.

Q We are referring to peak, including Units 3 and 4?

A Yes sir.

Q In the year of '79 and '80, I see a new color has been added to the lefthand bar, is that correct?

A Yes sir.

Q That purports to be what color?

A It's sort of a brown on my copy here.

Q Well anyway, it's a different color from the rest.

A Yes sir.

Q That's been placed on top of your resources bar, is that right?

A Yes sir.

Q Indicating that this is an additional resource?

A Yes sir.

Q And for the year '80 and '81 you have this additional color also superimposed upon the top of the '80-'81 left-hand bar, is that right?

A Yes sir.

Q You have that similar situation for subsequent years after that.

A Yes sir.

Q So that the lefthand bar, we can say, represents the resources and when Colstrip 3 and 4 comes on, it includes that also?

A Right.

Q Now then, taking the righthand bar in each group of two bars at the base of each you have a yellow color, what does that represent?

A The total load of the five participants.

Q And you previously testified to that regarding Exhibit 4, have you not?

A Yes sir.

Q On top of that you have a red color that's part of the bar, and what does that represent?

A It represents the forced outage reserves.

Q At the bottom of this chart you have ----

MR. SHENKER: Wait just a moment. I think he said "forced outage reserves". Is this different now from the maintenance and reserves category?

MR. HOFACKER: Yes sir. Forced outage reserves with peak capability, which, if I did not use the term before in the previous charts, I could have as far as peak.

MR. SHENKER: Well, then I have a confusion, Mr. Hearings Examiner, I think if Exhibit 4-A is supposed to be simply a graphic representation of what appeared on Exhibit 4; on Exhibit 4 the surplus line is described -- the surplus or deficit line -- is described as over total load maintenance and reserve. I just want to make sure that Exhibit 4-A is trying to show the same thing, mainly the surplus or deficit over or under total load, maintenance and reserves.

MR. HOFACKER: It is.

MR. SHENKER: Okay.

HEARINGS EXAMINER: That's the first time I've heard you use the word "forced outage reserves" too, maybe you could clear that up for the record.

Q Would you explain what you mean by that?

A Forced outage reserve is reserves having to do with the machine or the turbine generator being forced out through some failure, becomes inoperable -- it's a forced outage reserve -- it's the terminology. It's not an outage that was planned or scheduled.

Q Are the figures denoted by the bars in Exhibit 4-A purportedly the same as those represented by the figures in Exhibit 4?

A They are, sir.

Q Now going back to Exhibit 4-A once again, at the bottom of this particular exhibit you have a series of years just as you had in the previous exhibits, do you not?

A Yes sir.

Q On the lefthand side you have figures representing what?

A Thousands of megawatts.

Q As far as the year '75 and '76, what do the two bars indicate?

A That we have a surplus of resources over total load reserves and maintenance.

Q Does that continue through the years?

A Continues until '83-'84.

Q And during the year '83 and '84 you have what?

A A deficit of 499 megawatts.

Q And you can tell that, I assume, because the right-hand extends higher than the left-hand bar?

A Yes sir.

Q For subsequent years thereafter, shown upon this particular exhibit, what do the bars indicate, deficit or a surplus?

A Deficit.

Q Now, I am handing you Exhibit 4-B. Before I do that, is there anything else concerning 4-A that you would like to testify to?

A No sir.

Q What does Applicant's Exhibit 4-B purport to show?

A The energy loads and resources of the five companies in graphic form representing the figures in Exhibit 4 having to do with energy.

MR. BELLINGHAM: Mr. Shenker, in his inevitable way, Mr. Ross, will tell you that you have put the exhibit on the board too fast, or maybe you haven't -- you still have 4-A on there.

MR. SHENKER: Let the record show that it was Mr. Bellingham's inevitable way that criticized Mr. Ross unfairly.

Q Turning to Exhibit 4-B, was this prepared by you or under your supervision?

A Yes sir.

Q Is it true and accurate?

A Yes sir.

MR. BELLINGHAM: We'd like now to offer into evidence Exhibit 4-B.

MR. SHENKER: Objection on the same grounds.

HEARINGS EXAMINER: Very well, the same ruling. Exhibit 4-B will be entered into evidence subject to proper connecting up with the projections of the other applicants.

MR. BELLINGHAM: You have now produced on the board Exhibit 4-B, have you not, Mr. Ross?

MR. ROSS: Yes

MR. BELLINGHAM: I apologize for accusing you of leading too far.

Q Turning to Exhibit 4-B, Mr. Hofacker, this is based upon what portion of Exhibit 4?

A The lower half, or the average energy portion.

Q Calling your attention to the bars, in each group of bars in Exhibit 4-B, the left-hand bar is colored what?

A Blue, I think it is.

Q And that represents what?

A It represents resources -- total resources of the five participants.

Q When you come over to '79 and '80, you have, immediately above the blue portions, a red portion, do you not?

A Yes sir.

Q And that, I assume, you previously testified before, represents Colstrip #3, is that correct?

A Yes sir.

Q When you come over to '80 and '81, the red portion includes Colstrip 3 and 4?

A Yes sir.

Q The right-hand bar is colored yellow, and what does that represent?

A It represents the total loads of -- energy loads -- of the five participants.

Q Calling your attention to the year of '75 and '76, does that indicate a deficit or a surplus?

A A deficit.

Q Do you know how much?

A 87 megawatts.

Q What about the year '76-'77? Is that a deficit or a surplus?

A A slight surplus of 64 megawatts.

Q In '77-'78, deficit or surplus?

A Deficit of 46 megawatts.

Q And in '78-'79?

A Deficit of 467 megawatts.

Q And in '79 and '80 when #3 Colstrip comes on, what does that indicate?

A A deficit of 503 megawatts.

Q And what about the year '80-'81 when #4 comes on?

A A surplus of 117 megawatts.

Q And for '81 and '82, is that a surplus or a deficit?

A A deficit of 201 megawatts.

Q And for the years thereafter, that is for the years '82-'83 on, do the bars indicate a surplus or a deficit?

A Surplus.

Q Do you have anything further to testify to regarding Exhibit 4-B?

A No sir.

Q Addressing yourself to the total of the five participants' load as forecast in these exhibits that you have testified to, have you figured out what the average increase per year during that period of time is -- percentage-wise?

MR. SHENKER: I don't understand the question. I'd like to have it clarified. Excuse me, could you repeat the question?

Q Perhaps I'll rephrase it, because I don't remember the exact wording. Now then, have you calculated a percentage average increase each year in the five participants' load forecast over the ten year period that these past exhibits show?

MR. SHENKER: I suppose a formal way of stating my concern is that we have seen exhibits that show with Colstrip and without Colstrip. I think what the question is asking is like is it three percent a year increase or something of that sort. Would it be different whether it's with Colstrip or without Colstrip, So, I'd like to have that clarified. Otherwise, I would object to the question as being vague and ambiguous.

Q Do you understand the question?

A I think it would be well to be restated now, I'm not sure I do.

Q Insofar as the load forecast is concerned of the participants over a ten-year period represented by the various exhibits, does the coming on line of 3 and 4 Units at Colstrip vary the figures at all as far as the load is concerned?

A No sir.

Q Your forecast for this period of time then whether 3 and 4 came on would be the same, is that correct?

A Yes sir.

Q Why?

A Well, you project your loads and then design resources to fit the loads that you've projected.

Q So whether 3 and 4 came on, makes no difference then, is that correct, as far as your load forecasts?

A No sir.

Q I assume, then, that I may go back and ask you the original question, having satisfied Mr. Shenker as to an objection that really doesn't exist, hopefully. When we take a look at the five participants' load forecast over the ten-year period, have you made any calculation as to the percentage increase each year as far as energy is concerned?

A I have made specific calculations for each of the participants as to how their loads have grown. I think I'd have to horseback the figure for the combined.

Q Well, perhaps we can come back to that later then.

MR. SHENKER: After the horseback ride is over.

Q I would now like to hand you what has been marked as Applicant's Exhibit 5 and ask you what that purports to be?

A That is a tabulation of the Montana Power Company's peak loads and resources, excluding Colstrip Units 3 and 4, for the period 1975-76 through 1985-86.

Q Was this particular exhibit prepared by you, or under your supervision?

A Yes, sir.

Q And is it true and accurate?

A Yes, sir.

MR. BELLINGHAM: We now offer into evidence Exhibit #5.

MR. SHENKER: I don't think I'll have any objection if I can just ask a voir-dire question of the witness.

HEARINGS EXAMINER: You may ask it.

Voir-Dire, by Mr. Shenker:

Q Mr. Hofacker, was this Exhibit #5 that shows Rob Stuart's initials preparation February 25, 1975 furnished to Dr. Knau Shah at my request?

A Yes, sir.

MR. SHENKER: No objection.

HEARINGS EXAMINER: Exhibit #5 will be admitted without objection.

Continuation of Direct by Mr. Bellingham:

Q Now then, we have Exhibit #5, excludes Units 3 and 4, is that correct?

A Yes, sir.

Q And it is concerned only with peak or energy?

A Only peak.

Q Now here again you have a series of years just as you had on the previous exhibits. I assume these are for the same --

I assume they cover the same months as the previous ones. Is that right?

A Yes, sir.

Q Now then, starting over on the left-hand side, the first line indicates "firm peak load". What does this mean?

A That's the firm demand, maximum firm demand in our system during that season, as we forecast.

MR. SHENKER: Just in the event, Mr. Hearings Examiner, that someone should enter the hearing room and want to coordinate with his eyes what he hears with his ears, I think we shouldn't have the wrong exhibit up on the chart in pictorial form when we are talking about another exhibit.

MR. BELLINGHAM: Now, Mr. Shenker, we are very much concerned with what appears on the screen and we would be very happy to take them off at his request. Since we do not have a projection for this particular exhibit, so if it is alright I will not object to leaving it up.

MR. SHENKER: If you don't have one I insist on your objection.

Q What "firm peak load" do you project for the Montana Power Company for the year '75-'76?

A 967 megawatts.

Q And '76-'77?

A 1,000 megawatts.

Q And this goes up every year?

A Yes, sir.

Q And for the last year of 1985-86, what projection do you give?

A 1,639 megawatts.

Q Now then, your next line on the left-hand side indicates resources?

A Yes, sir.

Q And that is resources of Montana Power Company alone. Am I correct on that?

A Yes, sir.

Q And under that, you have listed various resources and have categorized them, have you not?

A Yes, sir.

Q And going down for the year of '75 and '76 you have hydro for what peak?

A 520 megawatts of peak capability.

Q And this pertains to Montana Power's generation as far as your dam is concerned?

A Yes, sir.

Q And that figure remains constant throughout the year?

A Yes, sir.

Q The next line indicates Bird and what is that indication?

A That's our 70 megawatt steam plant, oil or gas-fired, at Billings.

Q And that figure is what?

A 70 megawatts.

Q That remains constant throughout?

A Yes, sir.

Q Then the next line you have Corette and what does that indicate?

A That is our coal-fired generating plant located also at Billings of 180 megawatts peak capability.

Q And does that remain constant throughout?

A It does.

Q The next line is what?

A Colstrip Unit #1.

Q And for the years '75 and '76 you have given it a figure of what?

A 165 megawatts.

Q Does that figure remain constant throughout?

A Yes sir.

Q Over the years?

A Yes sir.

Q That figure represents what portion of the total generation capability of Colstrip 1?

A 50%

Q A figure of 165?

A Yes sir.

Q I think that Mr. O'Conner testified as to the difference between the figures of 330 and 350, did he not?

A I believe so.

Q What does the figure 350, when applied to Colstrip 1, or 2, mean?

A 350 is what you would call a nominal size or nominal capability. 330 is the net output of that plant which is available for sale to somebody.

Q So the figure 165 represents one-half of the net?

A Yes sir

Q I think youhave asterisks before Colstrip #1, do you not?

A Yes sir.

Q And that indicates what?

A When we anticipate it will be operational on a commercial basis.

Q What date?

A October 1, 1975.

Q The next line indicates Colstrip #2?

A Yes sir.

Q And you have no figure for '75 and '76, is that right?

A No sir.

Q And you have asterisks before that. What does that represent?

A It will be coming on line on July 1, 1976.

Q And so for the year of '76-'77 you have given it, that is Colstrip #2, a rating of 165 megawatts, is that right?

A Yes sir.

Q Does that same figure continue out the same over the years?

A Yes sir.

Q The next line you have BPA and in parantheses 100%. What does BPA mean?

A This is a long term purchase contract from Bonneville that I alluded to this morning. All energy, in other words, we get 40 megawatts around the clock, every day of the year.

Q And that is why it does say 100%, is that right?

A Yes sir.

Q And that is Bonneville Power Administration, is that right?

A Yes sir.

Q Now then, that figure has been extended over the years the same, is that right?

A Yes sir.

Q The next designation there is BPA 0%. What does that mean?

A That's peaking. We get 10 megawatts of peaking when we need it, but anytime we take it we have to return the energy that came with that delivery.

Q Back to the BPA 0%, the figures indicate that it is peaking it when you need it?

A Yes sir.

Q For use by Montana Power in case of an emergency?

A For use anytime we want it.

Q And you draw upon it?

A We do.

Q And that figure of 10 is the same throughout the years, is it?

A Yes sir.

Q The next indication there is BPA Wheeling. What does that mean?

A This is their payment to us, in kind, for the Wheeling service that is moving power from their system to the REA roads that are their customers in our service area.

Q In other words, you are performing a service for them and in return you get this particular resource, is that correct?

A Yes. This is in excess of the peak of the load. We get the peak requirements of the load plus this, in return for that service.

Q Now then, for the year '75-'76 you have it designated at what?

A 6 megawatts.

Q For the year '76-'77, it goes up then, doesn't it?

A 7.

Q And why is that?

A Because the load we are wheeling are growing slowly.

Q And it continues to rise rather slowly until it reaches a peak of 10.

A Yes sir, and the steps result from rounding out numbers.

Q The next designation there is WWP and what does that mean?

A The Washington Water Power Company in Spokane.

Q And what resource is that?

A 30 megawatts of peak.

Q Is that under contract or otherwise?

A Under contract.

Q And that is for the year '75-'76?

A Yes sir.

Q Do you have that ready for subsequent years?

A No sir.

Q And why is that?

A Don't have a contract for subsequent years.

Q Have you attempted to obtain one?

A We didn't need it in the subsequent years, so we didn't negotiate one. I would amend that subsequent years up to the next three years is what I am talking about. We didn't need it in those years.

Q I didn't follow that.

A We have a contract for 30 megawatts for '75-'76 but we do not have a contract for '76-'77, '77-'78, or '78-'79, as we do not in '79-'80 but we get up to that period of time Western Water Power did not have the peak for us.

Q I see. It wasn't available from them?

A It wasn't available from them.

Q All right, now Puget. What is that designation?

A 19 megawatts of peak.

Q From whom?

A Puget Sound Power and Light, excuse me.

Q This is one of the applicants in this case, is it not?

A Yes sir.

Q That is only for the year '75-'76, also, is that right?

A Yes sir.

Q Thereafter, none?

A That's right.

Q Why is that?

A Again, if we didn't need it, combined with the fact that they wouldn't have it as we get out in time.

Q All right, Hanford is the next designation with debt service. What does that mean?

A This is referred to the Hanford plant to utilize waste steam from an Atomic Energy Commission's plutonium manufacturing facility at the city of Richmond, Washington.

Q Is this based upon contract?

A This is a contract that was negotiated in the mid 60's.

Q When did it come in line, do you recall approximately?

A '67 or '68, I am not sure, which year now.

Q Who is the owner of that particular complex?

A Washington Public Power Supply System.

Q I see that for '75-'76 you have 39 megawatts?

A Yes sir.

Q And it increases after that in pursuant contract?

A Yes sir. Well this is pursuant to what we estimate the debt service will be. Now, this debt service alludes to the fact that we pay Washington Public Power Supply System for the 10% of the debt service of what we contracted to pay for and for which we receive power from Bonneville Power Administration at the Bonneville Power Administration rates.

Q This is the manner in which you obtain the peaking that you have in a contract with them, is that right, or with the company that owns it?

A No, it's the peaking we receive for the contractural payments to the owner of the plant for debt service.

Q Well now, this particular resource runs out in the year '79-'80, does it not?

A Yes sir.

Q And what is the reason for that?

A You will note that the second line below that is WPP and it should be SS. Number 1, which is a replacement for the original Hanford and you see that we get 80 megawatts from then on for that one in the following years. This contract has been renegotiated. The original plant was not available for service under the original schedule due to the fact that the Atomic Energy Commission said that it was too costly to operate the plutonium facilities, and thereby, the waste steam would not be available to us, to generate power etc.

Q So what is going to happen in the year '79-'80, or maybe following that as far as the present plant is concerned? Will it be phased out?

A We have a new plant to supplant it, I mean to replace it.

Q And the old one will no longer be in operation?

A Some portions of it will not. It's combining some of the equipment from the old plant.

Q I mean, is this the old plant, as such, is gone?

A That's right, and the old contract is terminated.

Q Now, the next item here is a Hanford extension. What does that mean?

A This was increased amounts of steam that we could get, or that Washington Public Power Supply System could get from the Atomic Energy Committee -- Atomic Energy Commission -- to run Hanford over and above what they were contractually to supply and this was at a price and negotiated.

Q And how many megawatts did you get?

A 84 megawatts.

Q For what year?

A Two years. '75-'76 and '76-'77.

Q And why none after that?

A There have been no further negotiations, to my knowledge, for increased amounts beyond there. None consumated at least.

Q Now the next figure is WPPS #1, and what does that refer to?

A The new power plant that Washington Public Power Supply System, that replaces the old Hanford.

Q You previously testified to that, did you not?

A Yes sir.

Q And you've got a figure of 80 megawatts meant for what year?

A 1980-81.

Q And does it remain the same over the remaining years?

A Yes sir.

Q As displayed by this particular exhibit?

A Yes sir.

Q The next line is BPA, and then towards the bottom Bonneville Power Administration. Offset for peak TRD, what does that refer to?

A Trade.

Q All right. What is the situation regarding that?

A We have, we received, payments called for downstream benefits for the storage in our, behind our Kerr project, and some of those payments from Bonneville are normally in the form of energy at their rates equivalent, the total of which would be equivalent to the downstream benefits due us.

Q You have only one figure over the years, is that right?

A I'm trying -- oh, now I have it. There are two entries for this same deal in 1978-79 because we have some past offsets that we're asking for in the way, or we have contracted to receive in the way of peak instead of energy, and the second line there of BPA energy for peak trade, even though they read differently, it's the same type of a deal, we will get 100 megawatts, our estimate is 100 megawatts from them for the year '78-'79 and thereafter. The one shot of 60 megawatts, sort of balances the books.

Q That is why it is only for one year, '78-'79?

A Yes sir.

Q As far as the figure of 60?

A Right.

Q Now, then, is there anything concerned with different resources that we have left out going over them?

A Not that I know of, other than everything below Colstrip #2 there, could be classified as purchases, different types of purchases, some exchange, but still in effect, purchases.

Q Those are not -- those do not represent generating units owned by Montana Power?

A Right.

Q And the only ones that represent generating resource units owned by Montana Power are those designated what?

A Hydro, Bird, Corette and the two Colstrip units.

Q And all others are contracts, is that right?

A Yes sir.

Q Now then, the total resource of Montana Power megawatts for the year '75 and '76 is designated as what?

A 1163 megawatts.

Q For the year '76 and '77?

A 1282 megawatts.

Q That goes up, then, does it not?

A Yes, sir.

Q And for the year '77-'78 I notice that it goes down?

A Yes, sir.

Q Any reason for that?

A We no longer had the Hanford extension.

Q Well, then the resource are energated for each of the subsequent years until the last period cf '85-'86, are they not?

A Yes, sir.

Q In the last year you estimate the total resource from Montana Power, at how many megawatts?

A 1340 megawatts.

Q Now, the next line is surplus over firm load. What is meant by that?

A That's the amount of resources we have available to us, in excess of the firm peak load as enumerated on the top line.

Q Is a question of subtracting one figure from the other?

A Yes, sir.

Q Which figure is subtracted?

A The upper figure from the lower - the firm peak load from the total resources.

Q All right. And then you have extended that out over the years showing a surplus for the year ending what?

A 1980-81.

Q And then from then on, what?

A Deficits.

Q Commencing with what year?

A 1981-82.

Q Deficit of how much?

A 22 megawatts.

Q And the deficit for the last year '85-'86 is noted as what?

A 299 megawatts.

Q Now then, the next item that's shown is less maintenance, is that right?

A Yes sir.

Q What does that mean?

A That's those small hydro units that must be taken out for maintenance during our peak period if we are going to get all of our annual maintenance accomplished in a year.

Q And I see that that's pretty much the same over the year?

A Yes sir.

Q And the next time is less reserve. What does that represent?

A That's the reserve that we carry to provide the reliability of service that is expected.

Q And that varies for the years, also I see, is that right?

A Yes, as our loads increase and our resources increase, it does.

Q The next time is interruptible included in above reserves. What does that mean?

A We have some loads that contracturally, we may interrupt at any time, for example, if we have a unit generator go down, we can interrupt those loads to provide the firm load service and these interruptibles, because they can be interrupted, at our discretion, for our use as reserves, are included in our reserve number that appears just above those.

Q And the last item is surplus over firm load? Reserve and maintenance, is that right?

A Yes sir.

Q What does that mean?

A That's the surplus that we have left after adequately covering our load and having available adequate resources to protect that load.

Q Well, I see that the figures don't indicate that that's always surplus, is it?

A That's right.

Q So in some years it can be something else?

A Yes sir.

Q A deficit, say?

A Yes, sir.

Q Here again, the deficits are indicated by figures in parenthesis marks?

A They are.

Q And you have a surplus of how much in the year '75-'76?

A 69 megawatts.

Q And the next year?

A 144 megawatts.

Q And the next year?

A 9 megawatts.

Q '78-'79?

A 64 megawatts.

Q Now, for the year '79-'80, you have a figure representing what?

A A deficit of 106 megawatts.

Q A deficit then continues for the remaining years, does it not?

A Yes, sir.

Q For the year '80-'81 it's what?

A 189 megawatts.

Q Deficit?

A Yes, sir.

Q And so it goes until the last year you have a deficit of how many megawatts?

A 635 megawatts.

Q And that's for the year of what?

A 1985-86.

Q Is there anything else about that particular exhibit that you would like to comment on?

A No, sir.

Q I would like to go back just a second. We -- you did discuss reserves in this, did you not?

A Yes, sir.

Q That you maintain? Now when you were being examined regarding the Applicants' load and resources, you testified, did you not, relative to how reserves are maintained and how, for planning purposes, the Montana Power reserves will go up one percent each year until it gets to 20, is that correct?

A Right.

Q And are these particular reserves for planning purposes, as you previously testified, have been represented and included in this exhibit?

A Yes, sir.

Q I now hand you, what has been marked as Applicants Exhibit 5-A and ask you what that purports to be?

A That's a graphical representation of the data provided on Exhibit 5.

Q It was based on Exhibit 5?

A Yes, sir.

Q Now then, here again we have a series of two two bars side by side, do we not?

A Yes, sir.

Q The left-hand bar represents what?

A Represents the resources available.

Q And the right-hand bar represents what?

A Load and reserve.

Q Was this particular exhibit prepared by you or under your supervision?

A Yes sir.

Q Is it true and accurate?

A Yes sir.

MR. BELLINGHAM: We offer that as Exhibit 5-A.

MR. SHENKER: One question, if I may ask one here. Mr. Hofacker, this doesn't purport to differ at all from 5 except for the graph that was in numbers before, right?

MR. HOFACKER: It differs in no way.

MR. SHENKER: No objection.

HEARINGS EXAMINER: Exhibit 5-A will be admitted.

(APPLICANT'S PROPOSED EXHIBIT NO. 5 IS MARKED FOR IDENTIFICATION)

Q Now, turning to the left-hand bar that I think you testified to as representing resources, the blue at the bottom of the bar represents what?

A Our own generation.

Q What do you mean by that?

A Those plants that we have and own and operate.

Q And the portion above the blue -- the dark blue I should say -- which is a lighter blue represents what?

A Purchases.

Q And these are purchases that you have previously testified to including BPA, WWP, did you not?
A Yes, sir.
Q And the right-hand bar, the bottom part, is designated in yellow. What does that mean?
A The total load.
Q Above that is red? What does that represent?
A Reserves.
Q That's above the total load?
A Yes, sir.
Q I notice that there is a gap in the bars near the bottom. What is the reason for that?
A It's a depressed zero. We didn't want to make a longer sheet.
Q Let's turn to the year '75-'76, the left-hand bar rises higher on the scale than the right-hand bar, indicating a what?
A Here indicating a surplus of resources.
Q All right. At the bottom you have years, do you not; at the left-hand side as in the case of your previous exhibits, you have what?
A Megawatts -- peak megawatts.
Q And this year, true is it not, that excludes units 3 and 4?
A Yes, sir.
Q All right then, for the year of '75-'76 I think you indicated you have a surplus of 69?
A Yes, sir.
Q Now, for the year '76-'77, is that indicated surplus or deficit?
A Surplus of 144 megawatts.

Q '77-'78?

A Surplus of 9 megawatts.

Q '78-'79?

A Surplus of 64 megawatts.

Q Now what about the year '79 and '80, what does that indicate?

A That indicates a deficit.

Q And how do you know?

A Because the resource bar is less than the load bar -- the load and reserves bar.

Q Then the load and reserves bar, the one on the right-hand side, goes further up the scale than the one on the left?

A Yes, sir.

Q And the year '80-'81 is a deficit or surplus year?

A A deficit.

Q And every year thereafter, as is shown on that particular chart, indicates either a surplus or a deficit, which one?

A Sur -- Deficit.

Q For each of those years?

A Right.

Q Up to and including the last year of '85-'86?

A Yes, sir.

Q Is there anything else about Exhibit 5-A that we should bring out?

A No, sir.

Q I will be going into the next exhibit in some detail. I don't -- it doesn't make any difference -- whatever you desire. Do you have something else?

A One thing of clarification that may raise a question.

You will notice on Exhibit 5-A, it says reserves above total load. And on Exhibit 5 we said surplus over firm load, reserves and maintenance. Now the differences are the same, because the total load includes the interruptible load that -- and the interruptible load is also part of our reserves -- so the net difference is the same and we have taken out also that maintenance that you couldn't see it on the chart so it is part of the reserves above total load.

HEARINGS EXAMINER: Very well. Recess until 3 o'clock.

(HEARING RECESSED)

(Following a brief recess, the hearing reconvened at 3:05 P.M. on May 28, 1975.)

HEARINGS EXAMINER: We will go back on the record.

MR. BELLINGHAM: I notice that Mr. Shenker is not here yet.

HEARINGS EXAMINER: Go ahead.

Continuation of Direct Examination of Mr. Hofacker by Applicants By Mr. Bellingham:

Q Mr. Hofacker, I would like to briefly go back to Exhibit No. 5 to clear up any misunderstanding on a couple of points. Do you have Exhibit 5 before you?

A I do.

Q Going under the "Individual Resources," referring you to the 30 megawatts listed following "WWP," I think I asked you the question as to why it was indicated in the year '75-76 only and no subsequent year, did I not?

A Yes, sir.

Q And what should be your answer in response to that question?

A That we did not need the 30 megawatts through the period of '78-79 and thereafter to the best of my knowledge Washington Water Power did not have peaking available to us for some years.

Q Why didn't you -- when I say "you," Montana Power -- need it in the year '78-79?

A Because you can see from the tabulation we have surpluses in those years.

Q Now calling your attention to the entry, "Puget -- 19" and that again is for the year of '75-76 only, is it not?

A Yes, sir.

Q What is the reason for no indication following that year?

A Well, I was confused when I replied before, and this will straighten it out, I hope -- that we did not need additional peaking during '76-77, '77-78, and '78-79 for the reason I mentioned before, that we had adequate resources in those years, but following those periods of time, Puget may very well have some peak available to us if we should negotiate for the same.

Q What about negotiations relative to periods in advance of this kind?

A Normally, we don't negotiate as far ahead for purchases and exchanges as you do when you're planning for putting on of generation. The pressure of time is normally not as great so you can wait until you're near the time of your estimated need to finalize a negotiation. You may have some negotiations going on, but the finalizing doesn't normally take place this far ahead of time.

Q All right. Now, we are through with Exhibit 5 and 5A, are we not?

A I think so.

Q And I hand you Applicants' Exhibit No. 6.

A You have not handed me that yet.

Q I now am handing you Applicants' Exhibit 6 and asking you what that purports to be?

A That is in tabular form the estimated loads and resources for average energy for the Montana Power Company, from the operating year 1975-76 through 1985-86.

Q Was it prepared by you or under your supervision?

A It was.

Q Is it true and accurate?

A Yes, sir.

Q Now, here again you have a series of years up above, is that correct?

A Yes, sir.

Q Does this exclude Units 3 & 4?

A Yes, sir.

MR. BELLINGHAM: I now offer in evidence Exhibit No. 6.

MR. SHENKER: Again, I don't think I have any objections. I would ask the same question of the witness on voir dire, if I might.

HEARINGS EXAMINER: Yes, sir.

Voir Dire, by Mr. Shenker

Q Mr. Hofacker, is this Exhibit No. 6 with Mr. Stewart's initials, February 25, 1975, one that you provided for Dr. Shaw at my request?

A Yes, sir.

MR. SHENKER: Then I have no objections.

Direct Examination continued by Mr. Bellingham

HEARINGS EXAMINER: Very well, Exhibit No. 6 will be admitted without objection.

Q As far as your average energy is concerned, the first entry on the lefthand side shows the firm energy load, does it not?

A Yes, sir.

Q And it increases from the figure of what in '75-76?

A 657.

Q Megawatts?

A Megawatts.

Q To a figure of what in 1985-86?

A 1,117 megawatts.

Q As far as your resources are concerned, those are listed, are they not?

A Yes, sir.

Q And under that your first entry is "Hydro Critical" -- what is meant by that?

A That's the energy capability of our hydro generating plants with critical water.

Q What is critical water? What do you mean by that?

A That's the amount of water available for generation during the historical record lows of flows in the streams.

Q You have a total of how many megawatts there -- hydro critical?

A 337.

Q Does that continue out through the remainder of the years?

A Yes, sir.

Q The same figure?

A Yes, sir.

Q The next item there is "Bird" -- is that the Bird Plant that you previously testified to?

A Yes, sir.

Q And why do you have no energy at all in megawatts under any of these?

A Bird is part of our peak reserve capability. It operates using natural gas or oil and we do not wish to run it for base or firm load unless we absolutely have to.

Q And you do use it for peak periods only?

A We do.

Q The next item is "Corette" and you have a figure of 157 after that for all of the years, is that correct?

A Yes, sir.

Q In comparing this particular exhibit, that is, Exhibit 6, to Exhibit 5, I notice that as far as peak is concerned you have Corette for 180, is that correct?

A Yes, sir.

Q And in this exhibit, No. 6, you have Corette for energy at a figure of 157.

A Yes, sir.

Q Can you briefly explain why?

A The Corette Unit is designed so that it can operate at 180 megawatts for only four hours at one particular time. This 157 is what you could realize from the Corette Plant 24 hours of the day for 365 days, if you had -- if you did not have to shut down for maintenance, which you will have to do, or did not have to provide spinning reserves, which by contract we do have to do. I think for a point of clarification on all of our thermo units here -- that is, Corette, Colstrip 1 & 2 -- those are gross numbers under the upper portion of "Resources," from which must be subtracted the maintenance and reserves before you get what actual contribution those units make in the way of energy to our resources.

Q Well, those subtractions have been made further down in Exhibit 6?

A Yes, sir.

Q Now, then, calling your attention back to Corette -- I think we have completed that, now that I think about it. Let's go to the next one -- Colstrip #1, you have 103 in '75-76. What is the reason for that?

A It operated only part of the year.

Q And you have 165 for subsequent years, is that right?

A Yes, sir.

Q And Colstrip #2, you have 145 for the year '76-77, the first year it comes on line. What that particular figure?

A Because there was not 100% of capability or availability during the first year.

Q Following that for every year there is 165?

A Yes, sir.

Q Megawatts, we're talking about. Then BPA 100% is the next item. We are out, now, of your own generating units, are we not?

A Yes, sir.

Q And now we're coming down to the contract items, is that it?

A Yes, sir.

Q And BPA 100% -- you have 40 for the year '75-76, and subsequent years it reduces, is that right?

A Yes, sir.

Q Do you want to explain why? What is the reason for that?

A We have been informed by the Bonneville Power Administration that they're going to phase out this portion of our contract with them.

Q And this particular item in the exhibit indicates that phasing out?

A Yes, sir.

Q Then we have the next one, "BPA Wheeling," over the years, is that right?

A Yes, sir.

Q And you previously testifed as to what that particular item meant in your other Exhibit No. 5?

A That's right.

Q This refers to energy, however?

A Right.

Q Then the next is BPA Offsets -- I think that is probably a new item, as such, and you have 11 indicated in the year 1975-76 and none in the year thereafter, is that right?

A Yes, sir.

Q What is your reason for that?

A Because this offset, as such, no longer exists after 1975-76.

Q "WWP Hanford Trade," is that right? That's next?

A Yes, sir.

Q And what figure is there indicated?

A It's a negative of 3 megawatts of energy traded to Washington Water Power for the peak shown in the previous exhibit.

Q Is that the reason for the negative?

A Yes, sir.

Q And that's for the year 1975-76?

A Yes, sir.

Q And it's none for the following years?

A Yes, sir.

Q Puget is listed at 4 and a -5 -- excuse me, 4 for '75-76 and -5 for '76-77, and none thereafter. Would you explain that?

A Well, in the 4 coming in, it's 4 megawatts of average energy we'll get from them in 1975-76, but in 1976-77 we trade 5 megawatts of average energy for the peak that was on the previous exhibit -- we're paying back for the peak that we received during the year 1975-76.

Q Hanford Debt Service, you have 3 for '75-76 and none for thereafter, is that right?

A Yes, sir.

Q Do you want to explain that briefly?

A Because we took the power in the form of peak instead of energy, thereafter.

Q The next item, "Hanford Extension," and you have three years there, 49, 49 and 60 -- what is the story behind that?

A That's the energy portion of the Hanford Extension I was alluding to when we talked about the peak, which was the extended operation of the plutonium generating facilities of the Atomic Energy Commission.

Q The next item is "Hanford 5 Mill."

A This is some power that is made available at a price of 5 mills, again an extended type of an operation by the Atomic Energy Commission.

Q And none for the years subsequent to the years '75-76?

A Right.

Q Next is WPPSS #1 -- what does that mean?

A Washington Public Power Supply System; it's a nuclear -- thermo-nuclear plant that replaces the original Hanford, and this is the energy portion that we will receive from that plant starting in 1981, per contract.

Q The next item there is BPA Energy Trade -- there is a series of negative numbers beginning with the year '78-79, is that right?

A Yes, sir.

Q What does that indicate?

A That is the energy that we trade -- that we give the BPA in return for the peak we receive, as illustrated on the previous exhibit.

Q That would be Exhibit No. 5?

A Yes, sir.

Q All right, then you have Total Resources -- how much for the year '75-76?

A 716 megawatts.

Q And that increases and decreases over the years, I see, does it not?

A Yes, sir.

Q And until the year of 1985-86 you have a figure of how much?

A 888 megawatts.

Q Now, the next item is Surplus over Firm Loan with Critical Water. What does that mean?

A That's the difference between the firm load on the top line and the total resources, and the resources, of course, were based on critical water.

Q The next item, Less Maintenance -- you previously testified when you referred to Exhibit 5 relative to what this meant, is that right?

A Yes, sir. This is the energy loss because of maintenance. It's down time on the machines.

Q And Reserves -- what is the meaning of that?

A That's the operating reserves we carry for thermo plants on our system.

Q And the Interruptable, including above -- what is that?

A That's the energy portion of those interruptable loads that is available to us for use as reserves, so we include them in our reserves.

Q All right, now the main item, I understand, on here is the last one -- Surplus Over Firm Loads, Reserves, Maintenance and Critical Water -- is that right?

A Yes, sir.

Q What does that mean?

A That means that's what we have left, if any, when we carry our firm load with the necessary reserves, and under critical water conditions.

Q And in '75-76 you had what?

A A deficiency of 2 megawatts.

Q And then you had a surplus through the following years to the year '78-79, is that right?

A Yes, sir.

Q When is your first negative figure?

A In 1979-80.

Q You had a deficit of how much?

A 67 megawatts.

Q And the next year, 1980-81, it goes down to 60?

A Yes, sir.

Q And what is the reason for that?

A You can see the difference in the purchasing contracts up there. The Woops No. 1 -- the Washington Public Power Supply System No. 1 -- comes on line, or at least we get power out of them in 1980-81.

Q And from there on, the deficit gets increasingly larger as the years go by?

A Yes, sir.

Q Till the year of '85-86 there is a deficit of how much?

A 290 megawatts.

Q Now, the next item is Median Water Average. What does that mean?

A If we get median water, which is the years when you had as much water better as you did poorer, it's the median that -- and this is the amount of increased energy capability to our system if we get that median water.

Q Well, that's an "if" type of thing, isn't that right?

A Yes. If we get it.

Q And the next item is "Bird Maintenance Deducted if Oil is Available," and what is the significance of that?

A That's the energy capability of Bird if oil is available and we have to run it.

Q Is there anything else regarding Exhibit 6 that you feel you should testify to?

A Not that I know of.

Q I now hand you what is marked as "Applicants' Exhibit 6-A," and ask you what that purports to be.

A This is in graphic form, a representation -- exact representation -- of the data on Exhibit 6. The energy loads and resources of the Montana Power Company, excluding Colstrip Units 3 & 4 for the periods 1975-76 to 1985-86.

Q And was this particular exhibit prepared by you or under your supervision?

A It was.

Q Is it true and accurate?

A Yes, sir.

MR. BELLINGHAM: I will offer in evidence Exhibit No. 6-A.

MR. SHENKER: No objection.

HEARINGS EXAMINER: Applicants' Exhibit 6-A is admitted.

Q Here we have a series of bars once again, do we not?

A Yes, sir.

Q And the dark blue on the lefthand bar of each series repreents what?

A The generation of The Montana Power Company.

Q Then you have a light blue immediately above that in the bar -- what is that representing?

A Those are the amounts of energy represented by purchase contracts.

Q Purchase contracts from third parties?

A Yes, sir.

Q And then the bar to the right, the yellow bar, represents what?

A Our total load.

Q And comparing the two bars and their length you can determine in what year there are deficiencies and in what year there are surpluses, is that right?

A Yes, sir.

Q And for the year '75-76, for example, is that a deficit or a surplus?

A A deficit of 2 megawatts.

Q A very small item?

A Yes, sir; by the way, I should elaborate that the generation has had the maintenance and reserves netted out so that that bar represents that figure.

Q Now, then, the year '76-77 the bar represents a deficit or a surplus?

A Surplus.

Q How much?

A 153 megawatts.

Q In '77-78 and '78-79 it represents surpluses or deficits?

A Surpluses.

Q When is the first deficit?

A In 1979-80.

Q Do you know what that deficit is?

A 67 megawatts.

Q And this is the first year after '75-76 that the righthand bar, representing the load, goes up higher on the megawatt scale than the lefthand bar?

A Yes, sir.

Q Now, then, for the year 1980-81, you have a deficit or a surplus?

A A deficit of 60 megawatts.

Q And for the years after that the bars indicate increases in deficits, don't they?

A Yes, sir.

Q Is there anything else about Exhibit 6-A?

A No, sir.

Q I now hand you what is marked as "Applicants' Exhibit 7," and ask you what that purports to be.

A That's a tabulation of the Montana Power Company peak load and resources, including Units 3 & 4, for the period 1975-76 through 1985-86.

Q How does this compare with Exhibit 6 and Exhibit 5 insofar as Units 3 & 4?

A It includes in the resource column the contribution made by Montana Power Company's portion of Units 3 & 4 as they come on line.

Q And Exhibit 7 pertains to peak, does it?

A Yes, sir.

Q Was it prepared by you or under your supervision?

A Yes, sir.

Q Is it true and correct?

A Yes, sir.

MR. BELLINGHAM: I will offer into evidence Applicants' Exhibit No. 7.

MR. SHENKER: There is one question I might ask. Exhibit 7, Mr. Hofacker, does not purport to change Exhibit No. 5, except by adding Colstrip 3 & 4, does it?

WITNESS: That's right.

MR. SHENKER: No objection.

HEARINGS EXAMINER: Applicants' Exhibit No. 7 is admitted.

Q In comparing Exhibit 7 to Exhibit 5, both of them pertain to peak, do they not?

A Yes, sir.

Q And as you have indicated, the only difference between these two exhibits is that the megawatt resources in Colstrip 3 & 4 have been added to Exhibit 7?

A Yes, sir.

Q Should we then expect to find the first four years indicated on Exhibit 7, that is the years '75-76 through '78-79, to be the same as those years on Exhibit 5?

A Yes, sir.

Q Now, then, what year would there be a difference between Exhibit 5 and Exhibit 7 insofar as your resources are concerned?

A In 1979-80 when Unit No. 3 is scheduled to be on line.

Q Now, going over to the lefthand column, your first line indicates Firm Peak Load, does it not?

A Yes, sir.

Q And the same explanation regarding that would be applicable as you made for that same line on Exhibit 5?

A Yes, sir.

Q And you then go down through Resources, indicating the various resources that you have, is that right?

A Yes, sir.

Q And these, I assume, would be the same -- the explanations would be the same as you addressed to Exhibit 5?

A Yes, sir.

Q With one exception, is that right?

A That's Colstrip 3 & 4.

Q I call your attention to the year 1979-80. You have an additional item in there that did not appear on Exhibit 5, and what is that?

A 210 megawatts for Colstrip Unit No. 3.

Q And Colstrip 3, according to your calculations, would become operational when?

A In 1979.

Q What month?

A The schedule is July 1, 1979.

Q And that's indicated on this exhibit, is it not, through an asterisk?

A Yes, sir.

Q Then you have the figure 210, and that would represent the peak coming from #3, and that figure is then extended throughout each year thereafter, is that right?

A Yes, sir.

Q The same figure?

A Yes, sir.

Q And the Colstrip No. 4 figure has been added to what year?

A 1980-81.

Q And that figure is what?

A 210 megawatts.

Q And according to the notation when does Colstrip #4 become operational?

A July 1, 1980.

Q And that 210 remains constant throughout the remaining years?

A Yes.

Q Now, then, I don't believe there's any reason to go down any of these items, because you have explained them when we went down the items in Exhibit 5, did you not?

A Yes, sir.

Q When we come to totals, however, surplus over firm loads, reserves and maintenance, there is a difference there, is there not?

A There is.

Q And for the year 1979-80, your figures show a surplus or a deficit?

A A surplus of 104 megawatts.

Q And what about succeeding years?

A 1980-81, a surplus of 231 megawatts; 1981-82, a surplus of 145 megawatts; 1982-83, a surplus of 57; and then a deficiency thereafter.

Q Now, is that the first deficit that appears on the chart?

A Yes, sir, 1983-84.

Q And what deficit do you show there in that year?

A 39 megawatts.

Q What about '84-85?

A 124 megawatts.

Q And '85-86?

A 215 megawatts.

Q Now, insofar as this particular exhibit is concerned, when and in what year can Montana Power use all of its share of Colstrip 3 & 4 in the event that it is built?

A It can use all of the peak by 1983-84.

Q Why do you say that?

A Because in 1983-84, with Colstrip 3 & 4,we have a deficiency of resources.

Q Well, you do show some surpluses, though, do you not, immediately following the operational dates of Colstrip 3 & 4?

A Yes.

Q And what will you attempt to do with those surpluses?

A Sell them if there's a market.

Q You haven't attempted to do that, I suppose, as yet?

A Not as yet. We don't know whether we're going to have them.

Q Is there anything else regarding Exhibit No. 7 that we have not covered?

A No, sir.

Q I now hand you what has been marked as "Applicants' Exhibit 7-A," and ask you what that purports to be.

A That's an accurate graphical representation of the data shown on Exhibit 7.

MR. SHENKER: No objection.

MR. BELLINGHAM: That's rather unusual. I hardly know how to proceed. We offer it into evidence. We offer Exhibit No. 7-A.

HEARINGS EXAMINER: Applicants Exhibit No. 7-A is received without objection.

MR. SHENKER: After six consecutive "no objections" you don't expect one now?

MR. BELLINGHAM: I expect almost anything. Has Exhibit No. 7-A been received in evidence, sir?

HEARINGS EXAMINER: It's been received.

Q All right, calling your attention now to the various bars and their colors -- turn to the lefthand side bars in each group. You have here at the bottom in dark blue what is designated as Montana Power Company generation, is that right?

A Yes, sir.

Q That's your hydro and your thermo units?

A Yes, sir.

Q And immediately above that, in lighter blue, you have what's been designated as purchases, is that right?

A Yes, sir.

Q And that continues for the year 1975-76 through 1978-79, is that right?

A Yes, sir.

Q And for the year 1979-80 you have an additional factor that's been added to the lefthand bar. What is that?

A That's the contribution of peak that is provided by Units -- Colstrip Unit #3.

Q And that is shown in light red, I guess, is that right? Or perhaps it's a brown.

A It think it's brown on my chart.

Q All right, we'll call it brown then; that is the contribution of #3 in '79-80, and what about '80-81?

A That's the contribution of both 3 & 4.

Q Turning to the righthand bar in each series, the bottom portion is yellow and is denoted as what?

A The total peak load of The Montana Power Company.

Q And immediately above that in red?

A The reserves above total load.

Q All right, for the years commencing 1975-76 you have a deficit or a surplus in the early years following that?

A A surplus.

Q And you can tell that because the lefthand bar rises above the righthand bar, is that right?

A Yes.

Q What is the last year that you have a surplus?

A 1983-84.

Q What year?

A 1983-84.

Q A surplus in 1983-84?

A No, I stand corrected -- until 1983-84.

Q You have a what?

A Surplus.

Q What is the last year you have a surplus?

A 1982-83.

Q What is that surplus?

A 57 megawatts.

Q And in the year 1983-84 and thereafter you have a deficit or a surplus?

A A deficit.

Q And the righthand bar appears above the left, or rises?

A Yes, sir.

Q Is there anything further relative to Exhibit 7-A that we have overlooked?

A Other than the chart on the lefthand side should have a break in that line alongside the numbers to show it's a depressed zero, and through some inadvertent thing, it wasn't done, but it's a depressed zero, anyway.

Q I now hand you what has been marked "Applicants' Exhibit 8," and ask you what that purports to be.

A That's a tabulation of the average energy loads and resources for The Montana Power Company for the years 1975-76 through 1985-86.

Q Was it prepared by you or under your supervision?

A It was.

Q Is it true and correct?

A Yes, sir.

MR. BELLINGHAM: We offer into evidence Exhibit 8.

MR. SHENKER: I have a question, if I might.

HEARINGS EXAMINER: Proceed.

MR. SHENKER: The first question is the same as with respect to Exhibits 7 and 6, Mr. Hofacker -- have you provided this for Dr. Shaw?

MR. HOFACKER: We have.

MR. SHENKER: The other question, on the bottom of the lefthand side of Exhibit No. 8 there's a reference to Colstrip No. 3 being operational July 1, 1979, is that just an estimate of what you hoped for?

WITNESS: Yes, sir.

MR. SHENKER: No objections.

HEARING EXAMINER: Applicants' Exhibit No. 8 is admitted without objections.

Q Does this particular exhibit compare to Exhibit No. 6?

A Yes, with the exception that the effects of Colstrip Units

3 & 4 have been added thereto.

Q To which exhibit?

A Exhibit 6, I believe, unless I'm -- It says "Average Energy" -- yes, sir, Exhibit 6.

Q The effects of Units 3 & 4 have been added to one of the exhibits -- which one?

A Oh, added to Exhibit 8.

Q And to go back to Exhibit 6, that exhibit excluded Units 3 & 4?

A Yes, sir.

Q And Exhibit 8 includes them?

A Yes, sir.

Q Now, then, as far as your firm energy load, that figure would be the same as Exhibit 6, would it not?

A Yes, sir.

Q ~~Now, as far as the remainder~~ -- strike that -- as far as the resources of Montana Power are concerned during those years indicated on this particular exhibit, they would be the same as Exhibit 6 as applies to average energy, would they not, with one exception?

A Yes, sir.

Q What is that exception?

A The Colstrip Units 3 & 4 have been added.

Q And the first appearance of Colstrip #3 or #4 upon this particular exhibit, that is Exhibit 8, appears during what year?

A 1979-80.

Q And what appears?

A 184 megawatts.

Q What does the figure 184 apply to? Which unit?

A Unit #3.

Q What is the figure of 184 based on?

A It's based upon our expected energy producing capabilities of Unit #3 when it starts up on July 1, and there's a period of shake down so we don't anticipate a full year's capability in the way of energy.

Q And for every year following '79-80 you have attributed to it a megawatt capacity of how much?

A 210 megawatts.

Q For each year?

A Yes, sir.

Q Now, then, calling your attention to the line representing Colstrip #4. That first makes its appearance during what year?

A 1980-81.

Q And what is the figure?

A 184 megawatts.

Q And the reason for the figure of 184 megawatts, I assume is the same as applied to #4 as is applied to #3, which you described?

A Yes, sir.

Q And for every year following '81 you have attributed the figure of what to Unit 4?

A 210 megawatts.

Q I see no need to go into the various other items that appear on that particular exhibit, with the exception, perhaps, of total energy in the Montana Power system for the year 1979-80, insofar as resources are concerned, again are what?

A 1,021 megawatts.

Q And that moves up to a figure of how much for '85-86?

A 1,308 megawatts.

Q Now as far as the critical item you referred to down below as surplus over firm load, reserve and maintenance, critical H_2O condition -- that indicates a deficit or surplus in the year '75-76?

MR. SHENKER: I will object to the question to the extent that it refers to a critical item. The Board will determine what's critical and what's not critical in this case.

HEARINGS EXAMINER: Would you rephrase the question?

Q Do you see the item down below that denotes surplus over firm load, reserve, maintenance, and critical H_2O?

A Yes, sir.

Q Does that figure indicate a surplus or deficit? For '75-76?

A Deficit of 2 megawatts.

Q And from then on for a period of three years it indicates a surplus, does it not?

A Yes, sir.

Q And for the year '79-80 is there a surplus?

A Yes, sir.

Q What is that?

A 91 megawatts.

Q And the year '80-81?

A 296 megawatts.

Q And it continues to be a surplus, does it not?

A Yes, sir.

Q For succeeding years?

A Right.

Q Those surpluses, I notice, are being reduced from year to year?

A Yes, sir.

Q What is the reason for that?

A Load growth.

Q Now, then, you go out to the year of '85-86 and you have a what?

A Surplus of 75 megawatts.

Q If we were to project this out further, which you have not done in this particular exhibit, would you have a surplus or a deficit, in the best of your opinion, for the year of 1986-87?

A A surplus.

Q What about the year of '87-88, in your opinion would you have a surplus or a deficit?

A Deficit.

Q Why do you say that?

A Continued load growth.

Q In other words, the figure of 75, 85, 86 would be reduced from year to year?

A Yes, sir -- 75 at that time represents about a year and a half energy load growth.

Q And these figures that you have referred to indicate that Montana Power could use all of the average energy available to it with the inclusion of 3 & 4 during what year?

A 1986-87.

Q Now, I'd like to call your attention --

MR. SHENKER: Just a minute. I think he said what these figures indicate with reference to Exhibit 8, and that the year 1986-1987 doesn't appear on Exhibit No. 8 I want clear for the record. Mr. Hofacker is projecting something that is not on the exhibit.

HEARINGS EXAMINER: Very well; your objection will be noted.

MR. BELLINGHAM: I think that he has testified relative to his projection beyond, and I rephrased my question.

HEARINGS EXAMINER: Let's keep rolling; it's getting close to 4:00.

MR. BELLINGHAM: If I may continue at this time?

HEARINGS EXAMINER: Go ahead.

Q Mr. Hofacker, you have projected figures out beyond the year 1985-86, have you not?

A Yes, sir.

Q Based upon this projection, what is the first year that Montana Power can use all of the average energy available to it, including energy that will be available as a result of the addition of Colstrip 3 & 4?

A I gave you an incorrect answer previously. Based on my projection, we could use all of it by 1987-88.

Q Is there anything else about this particular exhibit that you'd like to go into further?

A No, sir.

Q I now hand you what has been marked as "Applicants' Exhibit 8-A," and ask you what that purports to be.

A That's an accurate graphic representation of the figures tabulated on Exhibit 8.

Q It includes or excludes Colstrip Units 3 & 4?

A It includes 3 & 4.

Q It applies to energy or peak?

A It applies to energy.

Q And it is true and accurate and was made under your supervision?

A Yes, sir.

MR. BELLINGHAM: We offer into evidence Exhibit 8-A.

MR. SHENKER: No objection.

HEARINGS EXAMINER: Applicants' Exhibit 8-A is admitted without objection.

Q Now, we have here again a bar graph, do we not?

A Yes, sir.

Q On the lefthand bar of each group you have blue, or what looks almost like purple, on the lower portion of the bar, is that right?

A Yes, sir.

Q What does that represent?

A That's Montana Power Company's generating capabilities.

Q And immediately above that you have a lighter blue, and what does that represent?

A The purchases.

Q And also in the lefthand bar, is that right?

A Yes, sir.

Q And I notice that commencing with the year 1979-80 there is a further addition to that?

A Yes, sir.

Q What is that?

A The energy contribution for Colstrip Unit #3.

Q And that is represented by a shaded bar of what color?

A Red.

Q Now, then, the righthand bar in each group is colored yellow, is it not?

A Yes, sir.

Q What does that represent?

A Montana Power Company's load -- energy load -- total.

Q Now, then, for the year of '75-76, what does the bar graph in Exhibit 8-A indicate as to deficiency or surplus?

A A deficiency of 2 megawatts.

Q The year '76-77?

A A surplus of 153 megawatts.

Q Now, as far as this particular graph is concerned, does it show any deficit for any of the years that are indicated upon the graph?

A Nothing after '75-76.

Q In other words, there's a surplus only?

A Yes, sir.

Q And here you have not extended this out, just as you did not extend out Exhibit No. 8 to further years, is that right?

A That's right.

Q If you did, according to your calculations, would you have a deficit in any of the years after '85-86?

MR. SHENKER: Just a moment. I will object to the question unless it makes clear that this is the same reference as with respect to Exhibit 8, namely a projection of the loads without projecting resources further.

HEARINGS EXAMINER: Does counsel have any objection to the question including that?

MR. BELLINGHAM: No, that's fine.

HEARINGS EXAMINER: All right, the question will include the matters stated by Mr. Shenker. You may answer it if you can read that into it all right.

Q Do you know what we're talking about, Mr. Hofacker?

A I believe so. I will attempt to answer.

Q All right.

A Projecting continued load growth beyond the period 1985-86 I would expect a deficiency in the period of '87-88.

Q And the reason would be the same as you indicated in Exhibit 8, is that right?

A Yes, sir.

Q Now, then, I would like to go back, if I might, for a minute or two, regarding the five participants' load forecasts. Do you recall the exhibits that were previously introduced regarding the forecasts of the five participants?

A Yes, sir.

Q You testified to them, did you not?

A Yes, sir.

Q Had you tabulated the increase in average energy, percentage-wise, over the period of ten years, per year, in the participants' load forecasts?

A I have.

Q I am now referring to average energy.

A Yes, sir.

Q What is that increase per year?

A Just under 6% per year, compounded.

Q What do you mean "compounded"?

A Six per cent per year per year. It's like compound interest on a savings.

Q Have you calculated the increase in peak of the five participants' load forecasts?

A Yes, sir.

Q Over a period of ten years, per year?

A Yes, sir.

Q What do you find that to be?

A 6% per year per year.

Q That's compounded?

A Yes, sir.

Q Approximately the same as the previous figure you gave for average energy over the same period of time?

A Yes, sir.

Q Do you know how much Montana Power requires -- it presently imports, approximately, and let's first start out with peak?

A Yes, sir. I believe it is about 20% this coming season -- or the season that we're entering on July 1. Yes, sir; 20%.

Q And upon what did you figure this percentage?

A The amount of purchases over the total resources.

Q What about importation of Montana Power requirements insofar as average energy is concerned?

A About 17% for 1975-76.

Q When we talk about importing approximately a certain percent of its requirements, what do we mean by that?

A We had to go outside of the Montana Power Company's capability to get resources to carry our load or provide for adequate reserves.

Q Why do you have to do this?

A Because we don't have our own generation available.

Q You have a deficit, in other words?

A We have a deficit, yes, of resources.

Q For how long a period has the Montana Power been doing this? Do you recall?

A I know that with the Bonneville Power Administration, that contract has been in effect for I believe about 24 years. I know we're in our second twenty-year period. And I'm certain that there were purchases or exchanges with our neighboring utilities of varying amounts in the years following interconnections with them.

Q Well, as far as the importations in the amounts, though, that you have approximated, approximately how long has that been in recent years?

A Well, it's been going on since the '60's, for sure.

Q The early '60's?

A I believe in the early '60's, yes, sir.

Q In our tabulation of these various exhibits we have been dealing with estimated load forecasts, haven't we?

A Yes, sir.

Q And when we say "load forecasts" what do we mean?

A That is our best estimate as to what our load requirements are going to be as we look to the future.

Q And Montana Power Company makes load forecasts, does it not?

A Yes, sir.

Q For the reasons that you gave?

A Yes, sir.

Q And do other utilities do the same thing?

A Yes, sir.

Q Is this a continuing effort on behalf of the utilities?

A Yes, sir.

Q Why do you carry on this load forecasting procedure?

A Because there's a certain time delay from the determination of a need until you can satisfy it with a resource of some sort.

Q What does it do in the long run insofar as your operation is concerned?

A It assures our being able to carry our loads as they come on line.

Q Insofar as your resource planning, do you rely upon the load forecasts?

A We do.

Q So it becomes a necessary adjunct of your resource planning?

A Yes, it does.

Q Insofar as your forecasting is concerned, are there any time periods that are generally involved in this procedure?

A We have projected loads 20 and 25 years ahead, as sort of a normal activity. However, in projecting for the formation of firm plans for resources, we normally narrow that down to ten years. At one time we could go almost down to five years, because you could get resources on on time, but at the present time you need about ten years to have a good chance of getting the resources on in time.

Q So today a 10-year forecast has become the most significant as far as your forecasts are concerned?

A Yes, sir, with the current times of -- the processes you have to go through to get a resource on require about that.

Q Would you like a break for a few minutes, or is there any problem?

A Okay; I'll say yes.

(BRIEF RECESS, 4:08 P.M.)

(Following a brief recess, the hearing reconvened at 4:22 P.M.)

MR. BELLINGHAM: We have exhibits received being 2, 3, 3-A, 3-B, 4, 4-A, 4-B, 5, 5-A, 6, 6-A, 7, 7-A, 8, and 8-A, is that right?

MR. SHENKER: Prior to Exhibit 5 -- that is the exhibits with respect to all five of the participants, I understand those are all conditionally received, subject to the proper input of the other applicants.

HEARINGS EXAMINER: That is correct, and I have written it right on the exhibits. Very well, you may proceed, Mr. Bellingham.

Continuation of Direct Examination of Mr. Hofacker by Applicants By Mr. Bellingham

Q You have a section under you that makes estimations of load forecasts, do you not?

A I do.

Q What is the section called?

A The Long Range Planning Section.

Q Who heads this particular section?

A Donald Gregg.

Q Is he an engineer on your staff?

A Yes, sir.

Q How long has he been with Montana Power Company?

A 26 years this year, I believe.

Q Is there anybody else on that particular staff besides Gregg?

A W. H. Blankmeyer, who's been with the Company over 30 years, I think; Richard P. Davenport, who has been with the Company for I believe right at 25-26 years; Phillip H. Eagles, who has been with the Company I believe for about 25 years; Joseph Jolly, who has been with the Company for -- I believe it's approaching four years, 4 or 5, perhaps; and Rob Stuart, who has been with us now about 3 to 4 years, I believe.

Q And that concludes the list?

A I believe so.

Q Will you explain generally how Montana Power goes about making its load projections?

A We start with the historical record of our loads, currently going back to 1952. From our total load we subtract those loads that are not trendable, in that they vary considerably from time to time due to the nature of their business, such as strikes, changes in their methods of operations, and this is principally the Anaconda Company I am referring to. We then get down to what we call a base load, which is trendable.

MR. SHENKER: Which is what?

WITNESS: Trendable.

Q The base load consists of the total load less what?

A Less the Anaconda Company now. Heretofore in some of the previous years it included the Milwaukee Railroad that we no longer supply, because the Milwaukee Railroad was just a flat load that did not grow. There may have been one or two other minor loads, I don't recall now, but essentially it's the Anaconda Company now. And this gives us this trendable load.

Q You call that a what?

A Base load.

Q What do you call the load that is deducted from your total, resulting in the base load?

A Well, that's the industrial load that is not trendable, it varies.

Q Is there another word for it, such as block load?

A Oh, block load, sure.

Q Proceed.

A That then we, through the use of a computer program that will plot a least squares curve best fit to the base loads as they -- as history has shown them to be; that plotting from '52 to '71 indicated a compound rate of growth of 5.5%.

MR. SHENKER: Mr. Hearings Examiner, I would move to strike that portion of the answer which refers to a computer program on the grounds that we have for the last three months tried to obtain these computer programs from the Montana Power Company, to date still unsuccessfully.

MR. BELLINGHAM: That's in the process of being obtained.

MR. SHENKER: It has been in the process for three months, and we now have a witness on the stand who is referring to a computer program to which I have not had an opportunity to do any review.

HEARINGS EXAMINER: I will overrule the objection with the understanding that you will provide them with the computer program on projected loads in this particular case by the time of cross-examination, or he will be subject to recall for that purpose.

A Prior to the computer program we did this by hand, which is the least squares method that is common in statistical analysis. Using that, as I said before, our growth rate of the base load has been 5.5% from 1952 to 1971, and when we added '71 to '74 this compounded growth rate from 1952 through 1974 was about 5.6%, compounded annually. Projecting ahead the base load, we then assess that projection with the information we have or can obtain as to anticipated population growth in our service area. Checking meter connects and disconnects of the Montana Power in our service area will give us some indication of this. There are statistics put out by various agencies of the State of Montana, population estimates. We also, with our Marketing Department and with advice from our Division Managers, Superintendents, we assess the economic picture -- what does the economic future in our service area look like in the immediate few years? We also assess these projections against what we see in the way of pricing of alternate forms of energy -- for instance, natural gas, because we also serve natural gas. This is a joint assessment with our Operating Department and our Marketing Department, and as I said, with information provided from our management in various areas, the divisions that I mentioned, and adjust our future projections in accordance with that. Now, the base load for the next three years we anticipate will grow less than the projection, but it appears to us that the economy, the economics of the nation, the potential load growth will bring it back up to at least our projected 5.5% per year by the year 1980, and continue on at that rate for several years following that. I was going to say then how we got back to the total load.

Q Go ahead.

A Then we add back in those block loads, the Anaconda Company, and if there are other loads that we have a firm commitment for, we add those in to come up with our total load projection.

Q You referred to your base load as showing a discernible trend, is that right?

A Yes, sir.

Q What do you mean by that?

A It follows a pattern. You can determine what this pattern is. It's a pattern from which there are only slight variations, if any, over the years. It is predictable.

Q Are you talking about history now?

A Yes, sir.

Q You talk about your block load as showing no discernible trend. What do you mean by that?

A Well, essentially the Anaconda Company. They are up and down in sizable amounts. For instance, when they decided to discontinue their zinc operations in Great Falls. That was about 70 megawatts of firm load that disappeared. There is a certain portion of the Anaconda load that seems to follow a pattern, but when you add on these other large blocks that they add on here and there -- for instance,a furnace coming on that they have predicted of 39 megawatts or so, that's a block load. That's over and above what the trend would indicate.

Q You mentioned some of the factors that you analyze the base load as to, such as completing energy sources --

A Yes, sir.

Q Availability of other energy sources, would this be one?

A Yes.

Q You mentioned economic trends?

A Yes.

Q What about a potential within your system? Do you analyze those?

A Yes, sir, and we I could say almost 100% of the time have inquiries as to additional loads for which there could be power requirements, and we have several pending now.

Q What are we talking about here? Give us examples.

A Well, for instance, the Stauffer Chemical Company has asked us about the availability of 40-45 megawatts for furnace load in 1978 and an additional one in 1981.

Q Now, do you have other potentials; for example, agricultural potential? Do you analyze that?

A We do, and the rather rapid growth of sprinkler irrigation --

Q Is that something rather new?

A The sprinkler portion is of recent vintage, yes. There is a considerable effort converting from flood irrigation as well as irrigating lands that were not economically suitable to flood irrigation before to this sprinkler type irrigation, and as I understand it, for about half the amount of water you get roughly the same effect as with flood irrigation.

Q Let's go into some of the other items that are also taken into consideration under, perhaps, the general classification of economic trends and so forth. What about -- you mentioned the sprinkler systems -- what about street lighting?

A Street lighting has grown and I think that with the present day of vandalism and so forth it may increase some more, but it's a rather small portion of our total load. There was quite a growth in yard lighting in the past years, and this may continue. I don't know.

Q How about anti-pollution measures?

A I am sure that they're going to grow. In order for the industries to operate they're going to have to increase the power. They have to increase their anti-pollution operations and that requires power.

Q Why does it require power?

A There is no other way to improve the effluent. No matter how you go about it, it's going to take some kind of power, whether it's pumping power, or whether it's power supplied to an electrostatic precipitator; your sewage treatment is taking increasing amounts of power for your first and second, and now tertiary treatment of sewage, which I believe has been scheduled to be completed within a very few years.

Q Now, then, I think you mentioned various reports and so forth that you review, or I should say your section reviews, relative to economic trends in population increases. Can you give us an itemization of some of these?

A Well, your Intergovernmental Agency -- I believe that's it -- in the State Department puts out reports having to do, I believe, with population, economics and so forth, of the state. The University at Missoula puts out a periodic report on, I believe, population and economic studies. I think there is data available from the IRS. I'm sure there are other sources, but I can't bring them to mind.

Q Don't you have a list of them that you can refer to?

A I do. Maybe I should say I had a list (looks through papers). I mentioned Intergovernmental Relations here; County Profile is the population, employment, income from the Department of Intergovernmental Relations; I mentioned the economic report that's the Montana Business quarterly, the Bureau of Business and Economic Research, University of Montana; the Bureau of the Census, Washington, D.C.; The Department of Commerce; your Chamber of Commerce, state and national, put out reports in this area. I think that's pretty well the gamut.

Q These are publications of the source of the material that is furnished to you?

A Yes, sir, that we have in our files.

Q When you consider these factors and apply them to your so-called base load, this boils down to a question of what?

A As to what effects they're going to have on our future load growth.

Q Well, is it a matter of judgment, or what?

A It's a matter of judgment, yes, sir.

Q And the application of these items to your base load?

A Yes, sir.

Q Now, then, I think you mentioned "least squares" -- generally, this type of forecasting is called what? Using history, --

A It's a type of regression analysis.

Q Is there another word for it? A trend --

A It's a trend extrapolation; yes, sir; it's a trend extrapolation. You see what your historic data, as determined, what kind of a trend it has as you look to the future, or what it has had over the past several years. A trendable one is one that doesn't vary too wide. It's a dependable, trendable one -- it doesn't vary too much from the trend.

Q When you refer to "least squares," what do you mean by that?

A Well, the curve drawn through the points as determined -- the total of the squares of the distance of the curve from each of the points is the least.

Q Well, we go into that later in the exhibit, do we not? We will take it up at that time. Let's move over to another portion of this load forecasting. You mentioned a computer. How do you use a computer insofar as your forecasting is concerned?

MR. SHENKER: I will object to the question on the grounds that I have been trying to find out that information for three months unsuccessfully.

HEARINGS EXAMINER: Overruled. Maybe we will find out from your questions and answers just what they did, so I'll overrule and let him answer that question.

A It's used as a calculator; you speed up the analysis of the historical data and project to the future. It's a calculator; that's how it's used.

Q Yes, but in what fashion?

A We plug in the historical data, the month by month energy loads that we've experienced, and the month by month peaks, and it will -- then we project ahead as to what appears would be the future energy requirements and peak requirements of our base load.

Q When was your computer program last finalized?

MR. SHENKER: Same objection.

HEARINGS EXAMINER: You will have a continuing objection. Let the testimony go on.

MR. SHENKER: Thank you.

A Do you mean by that when we last put data into it?

Q What year was the computer program utilized?

A Well, the program was -- we first started using it in 1972.

Q You first started using it?

A The program was written, to the best of my knowledge, 1970-71 and utilized thereafter for this least squares calculation, and 1972 was the last change of the basic program, but the data plugged into it has been updated since then. I mean, the historical data as it comes on.

Q Insofar as the people in this particular load forecasting section, the planning division, are concerned, regarding their forecasting, are memorandums written customarily or is a lot of this work done without the benefit of writing?

A Well, formal memorandums may not always be written, but certain data, notes, and so forth, are utilized. There are memorandums put out periodically with the new load forecasts, based on updating of the data.

Q Do you from time to time compare the data that you obtain on a monthly basis with their forecasts?

A We do monthly.

Q Why do you do this?

A To test the accuracy of our forecast; to see whether there are trends developing that indicate we should change our forecasts upward or downward. We take each month and try to normalize them as best we can to reflect abnormal weather or failure from some loads that were stated to be on by that time that didn't make it at that particular time -- This is a monthly deal.

Q I think you indicated previously that the base load growth since 1952 to 1974 was what per cent per year?

A Through 1974 it was 5.6%.

Q What are we talking about, energy or peak?

A We are talking about energy, sir.

Q What about the years 1952 through 1971?

A That was 5.5%.

Q And you are currently using what rate to project the future?

A 5.5%.

Q What about your peak growth? How would that compare with
your energy?

A Roughly the same.

Q Have there been any recent events that might possibly have
an effect on the figures, such as increases in heating fuels
and other matters?

A Well, when we look at what's happening to the national natural
gas supply, as well as the price of it, it indicates to us
that there might well be an increase trend in the growth of
the use of electricity in lieu of the natural gas for house
heating and for cooking, or in other areas. In fact, just
visiting with the Boise-Cascade representative two days ago,
he says he can't remember in the past year whether they built
any mobile homes with other than electric heat for this reason.

Q Montana Power is in the natural gas business, also, is it not?

A Yes, sir.

Q What does it cost at present?

A At present the price at the border for the Canadian gas
imported into this State is $1.00 per mcf.

Q What does that mean?

A 1,000 cubic feet of gas.

Q When you say "border," what border are you talking about?

A The Montana-Alberta border.

Q Why do you refer to the Canadian increase?

A 85% of our gas comes from Canada at the present time.

Q When you say "our" are you talking about Montana Power?

A The Montana Power Company's natural gas, yes.

Q Have the Canadians given you any indication as to future prices?

A Yes, sir, we were informed here just weeks ago --

MR. SHENKER: Excuse me, Mr. Hofacker, if we're going to be referring to what the Canadians indicated to the Company, I'd like to know who the Canadians were and who indicated what to the Company representatives when, and if it were by written document, that that would be the best evidence. I have been asking for that kind of information for some time and it hasn't been available that I know of.

HEARINGS EXAMINER: Objection is sustained. Maybe you could put some more foundation into the question.

Q Well, is it a duty of yours to find out, as far as your section and your load forecasting is concerned, to learn the natural gas costs?

A We need to be aware of this information if we're going to adequately or accurately -- as accurately as we can -- predict what demand for energy in the form of electricity there might be, as affected by what the natural gas supply and price might be.

Q Do you obtain this information from any particular source?

A From our Gas Department.

Q You have a Gas Department?

A We do.

Q Do you keep abreast of the current price for gas?

A Yes, sir.

Q Have you, as far as the present price for Montana Power gas when you purchase it from Canadian sources?

A The other day the National Energy Board informed --

MR. SHENKER: Just a moment.

HEARINGS EXAMINER: You can answer that yes or no.

A Okay. Yes.

Q Have you obtained information as to what the price of gas is going to be in the future?

A Yes, sir.

Q And did you do this in the usual, normal course of business?

A Yes, sir.

Q For the reason that you previously gave?

A Yes, sir.

Q Do you expect or has there been an announced price increase in the future from Canadian sources, insofar as your purchases of Canadian gas is concerned?

MR. SHENKER: I will object to that question on grounds it obviously calls for hearsay. We have not been objecting regularly or even irregularly to the hearsay kinds of questions, but this is a matter to which we have been inquiring for some time, and now we're going to get to the testimony through this witness of what somebody else said may be an increase in price for natural gas. I'd like to know who is saying what to whom, and if the saying was being done in writing, I'd like to see the writing, which would be the best evidence. Therefore, I object to the question on the grounds that it does not produce the best evidence for this kind of a hearing, where we sit at this time.

HEARINGS EXAMINER: I think maybe he could answer that question yes or no, and then you could ask if there is a writing or not --

Q Would you answer the question?

A I have lost track of the question.

MR. BELLINGHAM: Would you read the question back?

REPORTER: "Has there been an announced price increase in the future from Canadian sources, insofar as your purchases of Canadian gas is concerned?"

A Yes.

Q How did you learn this?

A From Mr. William Coldiron and Mr. Roger Billings of our gas department.

Q Did you do this in the usual course of business?

A Yes, sir.

Q Do you know whether it was in writing or not or was it oral?

A I don't know.

Q At this time I would like to ask you if there is a firm price increase that has been announced insofar as the purchasing of natural gas supplies by Montana Power from Canadian sources.

MR. SHENKER: Well, obviously, I object to the question, because obviously the man that I should be cross-examining on that issue is William Coldiron or Mr. Billings, from the gas department, and they're not sitting in this witness chair, so I can't find out what the source of their information is at this point. Nor are they projected to be witnesses in this case. Moreover, this witness does not know whether the information was in written form or not, and that's not surprising, since it's obviously now secondhand hearsay, so if Mr.

Coldiron or Mr. Billings were here, they could tell us whether what they found out was in writing or not. If they found out in writing, that would be the evidence that we'd want to see. We've been asking for it.

HEARINGS EXAMINER: Do you have any response to that?

MR. BELLINGHAM: Well, he said in the usual course of business as far as load forecasting is concerned -- it's his group's responsibility to find out what prices of fuel are, and in this case, what the natural gas situation is as far as the Montana Power is concerned, and certainly we can drag witnesses in to learn this sort of thing, but we don't feel it's necessary under the circumstances. It is part of his usual course of business in determining this. They have to use this information and analyze it in estimating load forecasts, and it seems to us that as far as this particular hearing is concerned, under the relaxed rules of evidence, that it is admissible.

HEARINGS EXAMINER: Can you determine if there is a written announcement in this regard?

MR. BELLINGHAM: We certainly can.

HEARINGS EXAMINER: Is this foundation? Are any of these projections made on the announced price increase of natural gas?

MR. BELLINGHAM: There is some later testimony relative to the effect of the increase in the price of natural gas; yes, sir. From another gentleman.

HEARINGS EXAMINER: Can you pass this question?

MR. BELLINGHAM: Yes.

HEARINGS EXAMINER: Well, why don't you pass it, then, until the morning. In the meantime, if there is written information you could obtain it, and then we'll know where we're at in that regard.

MR. BELLINGHAM: All right.

Q There's another item here I'd like to probe, and that's the item of conservation. In analyzing your load forecasts, have you in recent years taken into effect, at all, the effect of conservation?

A We made a determined effort last fall, a serious effort, to determine what effect conservation had produced on our loads, and we were unable to correlate what effect, if any, and we assume there undoubtedly was some effect, as to what effect it had on the energy, because there were so many other variables that took place, such as extremely warm weather; some of the loads predicted by industrial customers not materializing at the time they said -- but on the peak, it appeared that there was some discernible effect on the peak during the 1973-74 period. However, during the 1974-75 winter peak, when we would normally get our peak in December or January, depending upon the weather, we did not have our annual peak; it did not occur until February; but the February peak, when reconciled against our forecasts, was slightly in excess of what we forecast for February. So if there was conservation we're not sure that it still has an effect on our loads.

Q Well, what about reduction in Christmas light decorations?

Does that have any effect?

A I'm sure that it does.

Q What winter would this show?

A 1973-74. Now, last year, at least to outward appearances to me, in flying in and out of towns in Montana it looked like most everybody had their Christmas lights back on again. The previous year it was very evident that they were dark and not being used, and we have had in the past an estimate that the Christmas lighting and the extra commercial load during the winter months -- or during the Christmas season -- adds about 20 megawatts, but that is under normal weather conditions, and so forth.

Q Did you mention the past few years as far as the winter seasons are concerned -- being warmer?

A I mentioned that the last two, in particular, were considerably warmer during the January and December -- December and January, if you put them in that order -- if we get the cold weather which we can expect, but do not always get, in December, that combined with the Christmas load normally is our big month, but it was not this year because it was warmer. Nor was it last year.

Q What does the effect of all this have upon your attempts to analyze the conservation -- the effects of the Montana Power Company and others on the national scene regarding that conservation effort?

A It clouds the issue terribly. That's the reason we could not determine what energy effect there was, but we thought we could discern some reduction at peak.

HEARINGS EXAMINER: Gentlemen, I think the tape is about to run out. We will recess until 9:00 tomorrow morning.

(RECESS, 5:00 P.M.)

* * * * * * * * * * * *